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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

OBSTETRIC AUSCULTATION AND PALPATION.*

By A. H. STEINBRECHER, M. D., Detroit, Michigan.

When called to a case of labor we feel more or less anxious. This feeling changes to one of satisfaction after making an examination and feeling the resistant surface of the head through the os uteri. But we often encounter some considerable difficulty in making this examination, especially in primiparæ, due to the irritable condition of the external genitals in displacement of the uterus and consequent difficulty in reaching the os, and frequently to the disinclination of the patient to permit an examination.

It has happened to me when this condition existed before the os uteri had dilated, and before the presenting part had engaged, that in making an examination I had diagnosed a vertex presentation which afterward proved to be the breech. An error of this kind might prove very disastrous to the reputation of a physician under certain circumstances. This error could not occur if we would, as a matter of routine in every case, employ external palpation and auscultation of the abdomen as an adjunct to internal examination. Obstetricians like Leopold, Credé, Olshausen and Winckel lay great stress on an external examination; in fact go so far as to say that in a normal case of labor internal examination is unnecessary.

While auscultation is being performed all clothing should be removed from the abdomen of the mother. The unaided ear or the stethoscope may be used. In my opinion the monaural stethoscope is to be preferred. By this method we obtain the sounds referable to either mother or child. Those of the mother are the uterine vascular murmur, uterine bruit. It is a simple blowing sound synchronous with the maternal pulse and heard loudest over the lower lateral walls of the uterus, ceases at the height of a pain, and can be heard as early as the fourth month of pregnancy, and is one of the important features in the differential diagnosis of other abdominal tumors. Other normal maternal sounds that can be heard are the pulse of the aorta, the heart sounds, intestinal sounds due to the movement of gases and fluids in the intestines.

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*Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

The sounds referable to the child are the fœtal heart sounds, which give us a very good idea as to the position, presentation, and condition of the child, aid in making the diagnosis of multiple pregnancy, and warn us of impending danger to the child.

The fœtal heart sounds are heard toward the end of the fourth and the beginning of the fifth month of pregnancy, ranging from one hundred and ten to one hundred and sixty beats per minute; at term averaging from one hundred and thirty to one hundred and forty-four beats per minute. It is most distinctly heard at that part where the left side of the child is nearest to the uterine walls. The sounds are distinguished from the maternal heart sounds by their frequency, and that the intensity of the maternal heart increases from below upward, while the fœtal sounds are more distinct from above downward, as it is possible in pathological conditions of the mother that the frequency may be the same in both. Some authorities claim that the sex of the child may be recognized in utero by the frequency of the fœtal heart sound. Ziegenspect, of Munich, has upon investigation found the average heart beat in the male to be one hundred and thirty-six, in the female one hundred and thirty-nine, per minute.

In my opinion one of the chief indications for a thorough knowledge of auscultation is in those cases when the child's life is in danger, and in order to recognize this condition an examination at least every half hour or hour should be made in order to ascertain the frequency and condition of the fœtal heart sounds. If we find a decline in the fœtal sounds below one hundred beats, not only during a pain but also in the interval, or a continuous well-marked rise above one hundred and sixty beats per minute, with weakened impulse, the indications are to deliver as soon as possible either with the forceps or version, otherwise the chances are that the child will be still-born. Another sound referable to the child is the umbilical souffle, a short blowing sound synchronous with the fœtal heart, usually heard over the child's back near the fœtal heart.

Abdominal palpation enables the physician to appreciate the size of the uterus and determine how far pregnancy has advanced; the presence and number of children in utero; the position and presentation of the child if in the transverse or long axis of the uterus; where we will find the head, breech, back, and feet. It enables him to modify the position if necessary, and helps him to ascertain whether the presenting part lies at the brim or is already engaged and fixed within the pelvis; whether the child be small or large, and whether the pelvis be deformed. It also aids in diagnosing existing diseases of the uterus and its appendages. Some of the obstacles to obstetric palpation are, fluid in the abdominal cavity, tenderness and inflammatory condition of the abdominal viscera, the presence of abnormal abdominal fat, the involuntary contraction of the abdominal muscles. The woman should be placed in the dorsal position with the thighs and legs flexed upon the abdomen—slightly rotated outward. The clothing being removed from the abdomen, the physician's hands previously warmed, he stands at either side of the patient, facing her, placing the extended hands, palmar surface, flat upon the abdomen. Being careful that all manipulation be made between uterine contractions, the hands now gently glide upward toward the fundus, and you are enabled to determine whether the child lies in the transverse or long axis of the uterus by feeling the head or breech, and you will also gain an idea of the size of the child and the length of time of pregnancy. From the fundus the hands glide over the side of the abdomen. On one side will be felt the small parts or extremities, usually the feet. These are recognized by their small size and irregularity of contour and the freedom in which they change their position. The hands next glide downward until you reach the pelvis. It is now advisable for the obstetrician to change his position so that his back will be toward the face of the mother. With the fingers directed toward the symphysis and gently pressing down into the pelvis, he endeavors to grasp the presenting part. If he feels a hard globular body it indicates the head, if it feel softer in consistency, probably the breech; or does the head or breech feel thicker, less distinct, and softer than normal? if so it is probably a placental attachment. If he fails to feel the head or breech over the brim it is probably a transverse position.

In the first vertex position, when the hands are pressed down into the pelvis they meet with a hard body. There is no similar body in the fundus of the uterus, therefore the head must be below and the breech must be above. If the left hand, which is on the left side of the abdomen of the patient, goes deeper in the pelvis than the right hand before it meets with resistance, then the occiput is directed to the left and in front, and if in following up along the left side of he abdomen, the hand meets with greater resistance than on the right side, then this would indicate the presence of the back. The feet or small parts are felt on the right side, and their movements can be noticed on inspection. On auscultation the fœtal heart sounds can be heard to the left and midway between the umbilicus and left anterior superior spine of the ilium.

In the second position the head is found below in the pelvis, the right hand going farther down than the left, which meets with the resistance of the frontal bone. The back and breach are felt on the right side. The feet or small parts on the left side. The fœtal sounds are heard on the right side midway between the right anterior superior spine of the ilium and the umbilicus.

In the third and fourth positions of the vertex we ascertain the presentation to be the head, but here in the third position the hand which depresses the abdominal walls on the left side meets with the most opposition on account of the prominence of the forehead.

In the fourth position the right hand meets with the greatest resistance; in the third we seek the back on the right side, in the fourth on the left side, of the abdomen, but as it is turned backward the resisting plane is narrower. In order to feel the back, we place the woman on her side. The small parts are felt on the opposite side. The fœtal heart sounds in the third position are heard on the right side, in the fourth position on the left side midway between the umbilicus and anterior superior spine of the ilium.

In face and brow presentations we feel the head below over the brim of the pelvis, but in these cases the head rises much higher and is more easily felt than in any of the vertex cases. Early in labor, there exists between the back and the head a deep furrow, into which the finger sometimes easily penetrates. This prominence of the head and the presence of this furrow is the distinguishing feature of a face presentation. In the first and fourth positions of the face the breech is to be felt on the left side and the small parts on the right side; in the second and third positions the breech is felt on the right side and the small parts or feet on the left side: but as a rule combining auscultation with palpation makes the diagnosis of a face presentation comparatively easy. In flexed cephalic presentation the fœtal heart sounds are heard where the back of the child is, in face cases. However, they are transmitted not by the back but by the anterior fœtal surface. This disagreement between palpation and auscultation suggests a face presentation, therefore in the first and fourth face presentation the fœtal heart sounds are heard on the right side; in the second and third on the left side midway between the umbilicus and the anterior superior spine of the ilium.

In breech presentations when the fingers are pressed into the pelvis they do not meet with the hard resisting surface of the head, but the presenting part feels softer and its outlines are much less distinct. On palpating the fundus we feel the hard, movable head above and the resisting back below. This may be felt on the right or left side, either anteriorly or posteriorly; the small parts or feet are felt on the opposite side. The heart sounds are most distinctly heard above the umbilicus, in the first position, to the left; in the second position, to the right.

Transverse presentations are not difficult to diagnose if the back is directed to the front, but may become so in the dorso-posterior position. In the first place the outline of the uterus is altered; its longer axis does not coincide with the axis of the superior strait, but is directed transversely or obliquely. On palpating the uterus we find that the pelvis is empty. We find the hard movable head either in the right or left iliac fossa. The breech can be felt on the opposite side usually higher up, so that the child lies obliquely. The small parts correspond with the breech. If it be a dorso-anterior position the back can be felt above the symphysis. If the head be on the left side the right shoulder presents; if the head be on the right side the left shoulder presents. In the dorso-posterior position it is just the opposite. The fœtal heart sounds are most distinctly heard in the median line below the umbilicus. In no other presentation is a knowledge of external palpation so important as in this, since an early recognition will warn us to preserve the integrity of the membrane as long as possible; will indicate to us which hand to employ in making podalic version—the left hand if the head is felt in the left iliac fossa and the small parts on the right side; the right hand if the fœtal head is felt on the right side and the feet on the left.

In twin pregnancy the abdominal tumor may be larger and more irregular in contour. If one child lies back of the other the diagnosis may be difficult, but if we can feel one head over the brim of the pelvis and one in the fundus of the uterus, with the corresponding small parts above and below, the diagnosis is comparatively easy, particularly if this can be confirmed by two heart sounds. In the latter case we will get the fœtal heart sounds of one child above, the fœtal heart sounds of the other child below, the umbilicus, that is, providing both children are living.

Abdominal palpation is useful in some of the obstetrical operations, such as fixing and keeping the child in a certain position in the uterus, in performing version, in pressing out the placenta, in insuring complete contraction of the uterus after labor, in fixing and steadying the uterus during the performance of perforation or ovariotomy, in forceps cases, and in breech cases, by keeping the uterus well contracted on the after-coming head, etc.

I will conclude by saying that in every case of labor if internal examination were combined with external abdominal palpation and auscultation a mistake in diagnosis could not be made.

HEALING OF CHRONIC ULCERS.

By F. A. VOTEY, M. D., Detroit, Michigan.

In the subject presented this evening, I wish to speak more especially of weak indolent ulcers of the legs, and their treatment by grafting with chicken skin. Who originated the idea I am unable to say, but I have had such success with the plan that a rehearsal of a few cases may be of interest. In each case the surface of the ulcer and that of the surrounding skin was rendered as aseptic as possible. Any excessive inflammation was reduced by antiseptic compresses, and flabby granulations cut down with nitrate of silver. When the granulations presented a sufficiently healthy appearance, a spring chicken was procured, and the skin underneath the wing carefully cleaned. As soon as it was killed a piece of skin was taken from the wing and put into a one four-thousandth bichloride solution. This was then cut into pieces one-tenth to one-fourth inch square and laid upon the granulating surface near the circumference. Over this was placed a layer of lint spread with iodoform ointment, then covered with bichloride cotton and bandaged. The patient was instructed to remain in bed.

Case I.—Catherine R., aged about fifty-five years; very corpulent. Has an indolent ulcer upon the outside of the left leg just above the ankle, about five by three inches. Surrounding skin tense and circulation poor. Ulcer has not been healed for ten or twelve years. Patient was prepared for grafting, and on June 2 twenty grafts of chicken skin were applied. Redressed on the 9th, and nineteen grafts remained adherent. June 30 the ulcer was reduced to three and one-fourth by one and one-half inches. Seventeen grafts were applied and sixteen remained on July 6. On August 6 ulcer was two and one-half inches long by seven-eighth of an inch wide. Twelve grafts were applied of which only seven have taken. August 27 ulcer was one and one-fourth inches long by five-eighths of an inch wide. Patient then left the city, and whether the ulcer eventually healed I could not ascertain.

Case II.—Daniel C., laborer; aged sixty-six years. Has had an ulcer of the leg for several years, which would heal but quickly break down again. Has not been closed for one year. Ulcer is circular, two inches in diameter upon the external surface of middle of right leg. Edges are everted with a large zone of inflammation surrounding the ulcer. Granulations congested. Edges were incised and ulcer poulticed, after which it was grafted with chicken skin on June 30. The bandage was disturbed by patient, causing only two grafts to remain. These grew rapidly and on July 15 ulcer was entirely closed. Patient was seen about six months afterward and cicatrix found to be firm.

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* Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

Case III.—Thomas B., laborer; aged forty years. Has had an ulcer on left leg above ankle for several years. Leg is much swollen and tissue around the ulcer inflamed. Will close up, but breaks down again readily. Is two and one-half inches in diameter. Leg was poulticed, and on July 7 ulcer grafted with chicken skin. Dressed antiseptically until September 3, when it was entirely healed. Cicatrix strong and remained so when last seen, four months afterward.

Case IV.—Miss D., domestic; aged forty-five years. Has an ulcer on the lower third of the left leg, five by five and one-half inches, which has not been healed for ten years. Leg is much swollen. Veins varicosed and edges of ulcer raised one-half inch. Edges were incised and strapped until reduced to a level with granulations. On August 6 sixteen small and three large grafts applied. August 17 all of the grafts have taken, and ulcer reduced to three and one-fourth by one and one-half inches. Ulcer was strapped occasionally until October 3, when outer edge of cicatrix began to break down. This was dusted with bismuth and on the 14th again grafted. The ulcer was reduced to about one inch when last seen. This was an especially difficult case on which many remedies had been tried with but little effect.

Case V.—A. L., boy of twelve years. An ulcer of the arm. Two years previous had received an injury in which a large amount of flesh was torn from posterior surface of left arm, with some injury to the elbow-joint. The wound healed but cicatrix has broken down frequently since. At present ulceration extends over olecranon process and is three or four inches long. Granulations are pale and flabby. Ulcer was prepared for grafting, and on June 30 nine grafts were applied. On July 6 five of the grafts had taken. August 2 ulcer was entirely closed with a strong cicatrix.

With the exception of the last these were unpromising cases, in which other means had been tried with poor results. Chicken skin furnishes a graft easily procured, and in sufficient quantity. It is easily applied, and produces a cicatrix much smaller, and not so contractile as by strapping or other methods. Whether or not it is durable would remain to be answered by further investigation, but so long as seen these cases showed no tendency to break down again.

LECTURES.

INFLAMMATION OF THE UTERINE APPENDAGES.

By CHARLES P. NOBLE, M. D., PHILADELPHIA, PENNSYLVANIA.
SURGEON IN CHARGE OF KENSINGTON HOSPITAL FOR WOMEN, PHILADELPHIA.

GENTLEMEN: The patient upon whom I shall operate to-day has well-marked inflammation of the uterine appendages, and there is every reason for us to expect to find on the left side a pyosalpinx, which I believe is of gonorrhœal origin. Our patient has been married nine years, is twenty-eight years old, has had two miscarriages, but no children; the last miscarriage was eight years ago. She has always suffered from dysmenorrhœa, which has grown steadily worse since her marriage. Leucorrhœa has always been present, and on several occasions has been quite irritating in character. Eight years ago she began to have groin pains and to suffer on exertion. Dyspareunia also became marked. Six years ago she had a labial abscess, and she has since had three others. She has never been confined to bed until September last (1891), when all her symptoms became aggravated. From September to Christmas she was in bed most of the time, and from Christmas until January 30, 1892, constantly. For the last three weeks she has been under my care, having all the symptoms of acute pelvic peritonitis, with chills, fever and sweats, indicating the formation of pus. The symptoms of pus formation were present when I first saw her, but she improved in every way under the medical treatment instituted. Operation was advised after recovery from immediate attack. This I believe to be the wisest course.

Pelvic peritonitis is almost always caused by salpingitis, and many recurrences are necessary, as a rule, to cause a fatal termination. Hence, unless there is evidence of the continuous formation of pus, with septic symptoms, or of a tendency of the peritonitis to become general, operation should be postponed until the patient has recuperated her strength, when she will be less liable to suffer from profound shock.

The principles governing the management of inflammation of the uterine appendages are pretty well settled, nor does there seem much prospect of change without the discovery of new facts in therapeutics. When the inflammatory process has advanced to the formation of pus, either as pyosalpinx, abscess of the ovary, or suppurative peritonitis, operation and removal of the diseased appendages is demanded to save life. Spontaneous recovery is scarcely possible, save by the discharge of the pus through the skin, vagina, bowel or bladder—alternative to exsection which is not to be entertained. The time for operation must be determined by the conditions present in each case.

The management of the appendages on the opposite side, when the inflammatory disease is unilateral, is still under discussion. Where the disease is of gonorrhœal origin, experience has shown that it is best to remove both appendages; because a gonorrhœal endometritis is left, which later infects the healthy tube and entails a second abdominal section for its removal. When gonorrhœa can be excluded with reasonable certainty, especially in young women without children, I would not remove the healthy tube and ovary, unless there be some particular reason for it.

Our patient has had the usual preparations for an abdominal section. For some days she has been on soft diet, has had daily baths, and has had the bowels well moved. This morning she had only a cup of coffee. The abdomen has been washed with soap and water, with water, with alcohol, and with bichloride solution. She has also had a bichloride douche. The woodwork of her room has been thoroughly cleaned and washed with bichloride solution, one to one thousand; and the room itself has been thoroughly aired. All the apparatus used about the operation has been similarly treated. This secures asepsis in our appliances. The instruments are heated to 290° Fahrenheit for two hours. They are then put in trays and covered with boiling water. The gauze and sponges have been made aseptic after the formula used in this hospital. Before use they are freed from chemical antiseptics by washing in boiled distilled water. All the water used about the operation has been recently boiled, and has been either distilled or filtered before boiling.

The hands and arms of the operator and of the assistants have been thoroughly cleaned with soap and water and with a nail brush, then soaked in a saturated solution of permanganate of potash; and this has been removed by soaking in a saturated solution of oxalic acid. Finally they are washed in bichloride solution, one to one thousand.

The patient being now on the table we will again wash the abdomen with soap and water, and shave the region of the incision and the pubes. This adds greatly to the cleanliness of the field of operation and prevents detritus from becoming adherent to the pubic hair. The soapy water is now rinsed off, the field of operation is douched with bichloride solution and this again is washed off with boiled water. This gives an aseptic field and aseptic appliances, with an entire absence of chemical solutions. From this time nothing but boiled water will be used for washing or douching, so that our patient will derive every benefit from antiseptic surgery and be in no danger of poisoning from chemical germicides.

As presumably the operation will be more than usually difficult the incision will be made relatively long—two and a half inches. The method used is to cut quickly down to the sheath of the recti muscles, which is likewise incised. (The slight hæmorrhage can be disregarded as a rule. It usually ceases spontaneously, and besides it is better to dispense with pressure forceps as much as possible, as bruising the tissues does not favor primary union). If the middle line is not apparent it is found by picking up the sheath of the rectus lightly and perhaps dissecting it to one side or the other. The posterior layer of fascia is now divided, and the præperitoneal layer of fat exposed. Up to this time the tissues have been divided *in situ*. As we approach the peritoneum it is best to pinch up the layer of fat and elevate it before cutting. In this way there is no necessity for the use of the grooved director. The peritoneum is incised in the same way. Before opening the peritoneal cavity bleeding from the incision should be controlled.

On passing my fingers into the pelvis I find a large inflammatory mass on the left side and a dilated and adherent tube on the right side. The tube is freed by pressing the adhesions off with the pulp of the index finger, until it can be drawn up, when the remaining adhesions are rapidly stripped off and the tube and ovary are well delivered, to be tied off in the usual way. On the left side the mass is made up of tube, ovary, broad ligament and bowel. Separating adhesions along the broad ligament an intra-peritoneal abscess is opened, containing about half a pint of pus. The tube can be plainly made out and freed, but it is not possible to find the ovary, which is embedded in plastic exudate. As the abscess has been discharged, rather than prolong the operation with our patient somewhat shocked, I will tie off the tube and leave the ovary.

Next the peritoneum must be cleansed of this foul pus. For this purpose I will pour into the belly several pitchers of warm water and irrigate the pus sac by means of a Davidson syringe. The gravity flushing apparatus also affords a desirable method of douching the peritoneal cavity—perhaps the best. By removing the pus in this way there is little danger of sepsis or peritonitis. I have seen the foulest pus poured over the bowels by the pint, and yet when it was thoroughly washed away no trouble resulted. In this way but little sponging is required.

A short drainage tube of medium size is now inserted. The tube should not reach the floor of Douglas' pouch, as injurious pressure might be made by it, and unnecessary pain would certainly be caused. The drainage tube is the sheet anchor of success in pus cases, and in all cases with many adhesions.

Deep and superficial stitches are now placed in position by means of the needle and carrier, and the sponges are counted to be sure that none is left in the abdomen. A nicer approximation of the sutures can be made by tying the superficials first.

A strip of gauze is now run down the tube, powdered iodoform and boric acid (one-seventh) is sprinkled along the incision, the gauze is laid over the region of the incision, a liberal layer of bichloride cotton is put in, and the Scultetus bandage is applied. Dressed in this way the tube is protected from atmospheric infection by the bandage and the cotton, and need be cleaned but twice daily, as a rule, because any excess of fluid is taken up by the gauze strip and cotton by capillary action.

The patient will now be put in bed and surrounded with warm water cans, to recover from the shock and ether.

NOTE.—She made an uninterrupted recovery.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, OCTOBER 17, 1892.

THE PRESIDENT, FREDERICK W. MANN, M. D., IN THE CHAIR.

DR. H. O. WALKER demonstrated the method of DR. MURPHY, of Chicago, in performing gastro-enterostomy and enterostomy, using for the purpose a dog. This method is known as MURPHY's anastomosis without the needle.

DR. E. W. JENKS: This method is referred to by MURPHY's collegues as something unprecedented, brilliant in its performance and results.

DR. FLINTERMANN: Has it been done on the human subject?

DR. WALKER: Yes. Five times successfully.

DR. G. W. STONER: Could not decalcified bone be used instead of brass in the manufacture of instruments?

DR. WALKER: No; you could not get the proper pressure.

DR. F. W. MANN: Could aluminum not be used in the manufacture?

DR. WALKER: The metal may be improved upon.

PATHOLOGICAL SPECIMENS.

DR. J. H. CARSTENS exhibited the following pathological specimens: (1) Cyst of the ovary. It had produced a great deal of pain and discomfort, there were many adhesions, and it was with great difficulty removed. (2) Vaginal hysterectomy. (3) The remnants of an old extra-uterine pregnancy. All the acute symptoms had subsided but this mass was a constant source of irritation to the intestines and surrounding organs. (4) Ovarian tumor. (5) Dermoid cyst, showing the long Scandinavian hair. **Dr. Carstens** also made the following report of abdominal operations made since last June: Abdominal hysterectomy, four; dermoid cyst, two; cirrhotic ovaries, two; chronic ovaritis, three; vaginal hysterectomy, one; extra-uterine pregnancy, one; appendicitis, one; ovarian cyst, three; cyst of broad ligament, two; Porro operation, one; malignant disease, two; tubercular peritonitis, one; pyosalpinx, four: total, twenty-seven. One death from shock, and one from purulent peritonitis.

Dr. E. B. Smith exhibited a leg amputated below the knee for indolent ulcer of many years standing, together with extensive caries.

Dr. Voorhees: What was the age of the patient?

Dr. Smith: Fifty-three years. The leg had been in this condition four years.

Dr. Voorhees: I have been able to cure a good many cases by strapping oakum and bandages. I think that is the only way to treat these cases. I remember one case thus cured which had existed twenty-five years.

Dr. Stoner: Inasmuch as there is also bone disease here as well as an ulceration of the soft parts, I think the amputation justifiable. The only criticism I could make is that the amputation might have been made a little lower.

Dr. Flintermann: What treatment has she had?

Dr. Smith: Recumbent posture, bandages, strapping applications, tonics, etc. The features of the case which to my mind necessitated the amputation were, first, extensive bone disease; second, the complete circling of the limb by the ulceration; and third, that the patient was a Polish woman and was, therefore, uncontrollable.

Dr. Voorhees: I have observed that in large and indolent ulcers of the leg, it is rather more advantageous to have the patient up and on his feet rather than lying down. Don M. Campbell, M. D., Secretary.

STATED MEETING, OCTOBER 24, 1892.

The President, FREDERICK W. MANN, M. D., in the Chair.

PATHOLOGICAL SPECIMENS.

Dr. Carl Bonning presented a fœtal monstrosity. The mother gave birth to the child at full term last June, since which time she has been very excitable and nervous. She menstruated last on July 10, since which time she has been in poor health, being confined to her bed two or three weeks. She came under my observation two weeks ago having a slight show. Last Friday she was delivered of this two and one-half months fœtus. On examination it will be found to consist of one large head, two eyes, is joined at the sternum and presents four arms and four legs. The abdominal cavity is not closed and the sex is undetermined. It has been my experience to observe that twin pregnancies frequently abort.

Dr. N. W. Webber presented the ovaries from a woman, a subject of epilepsy beginning at the time of puberty. The convulsions became more and more frequent until finally she was having three or four attacks a day. Various modes of treatment had been employed without success. The ovaries were removed last May, since which time she has had but one epileptic seizure. He also presented ovaries removed from a young girl giving a history of long continued ovarian pain and discomfort, together with a recent rapidly developing swelling in the left ovarian region. Third, an enormous enlargement of the left ovary. The patient has been running down for two or three months. Six weeks ago she noticed a swelling in her left side and this enormous growth which looks like a sarcomatous growth of the ovary was removed at Harper hospital on Saturday. The right ovary which showed signs of degeneration was also removed.

Dr. E. B. Smith exhibited a testicle showing chronic orchitis for four or five years. Hæmorrhage occurred four or five weeks ago. The testicle was then removed.

Dr. W. P. Manton: I wish to compliment Dr. Bonning on the rarity and beauty of his specimen. It is not often that we see such a monstrosity in so early a stage of development. Dr. Webber's case of epilepsy is a very interesting one. It is very questionable, however, if we can permanently cure epilepsy by these operations; still, I believe the operation to be justifiable if it hold out even a remote chance of modifying the severity of the disease. I saw to-day a case which I reported in the Detroit gynecological society as a case of hystero-mania treated by ovariotomy. At her last menstrual period she was slightly flighty, and at this period she lost consciousness for two hours.

DISCUSSION OF PAPERS.

Dr. E. B. Smith read a paper entitled "Lesions Above and Below the Cæcum."

Dr. E. T. Tappey presented an appendix vermiformis, removed from a child seven years old. Dr. Tappey also read a translation of an article by Dr. Mat Schede, of Hamburgh, bearing upon the subject of perityphlitis. He says: Perityphlitis belongs to that class of disease which has to thank the progress of surgery for our knowledge of its pathological anatomy as well as that of its treatment. Just as in diseases of the joints, we first attained to our accurate knowledge of the pathological anatomy when we obtained an insight into their progress by early resections, of which our knowledge had before been obtained only from amputated limbs and on the post-mortem table. But it is now only a short time since diseases of the cæcum and of the appendix have been brought into the domain of surgical treatment, and when the well-known German surgeon, Friedrich Lange, of New York, says, "In all of my student years and in my experience as assistant to two large university clinics I do not remember a single case of perityphlitis which was treated by surgical interference—" I can only subscribe to his personal experience. It describes the state of the case as it has been until within a very short time. Perityphlitis was assigned to the department of internal medicine of the hospitals, and, as a rule, only when the abscess involved the abdominal walls, was it opened by a single incision. We shall see that we must find other indications for operation, and that an active interference promises much benefit. In order to obtain a just appreciation of the question we must in the first place give up the generally accepted opinion that perityphlitis has to deal only with extra-peritoneal inflammation. Bardelaben and Luschka even in their time opposed the erroneous belief that the cæcum as well as the colon had only a partial covering of peritoneum. Lately Schuller, Trevis, Koote, and Lange have affirmed that the inflammatory processes in perityphlitis are almost without exception inside the peritoneum. Parityphlitic inflammation, if I include that which attacks the retro-peritoneal connective tissue, does occur, but much more seldom. The way in which it happens **Koote** has shown by means of a beautiful experiment, namely, that fluid injected between the folds of the mesentery of the appendix finds its way into the retro-peritoneal tissue. That pus may be found in retro-peritoneal tissue after the cæcum has become adherent and an abscess has then broken through the parietal peritoneum is obvious. Furthermore, all recent investigations and statistics show that what is known as perityphlitis, in by far the great majority of cases does not begin in the cæcum but in the appendix. The arduous labors of **Lang** held in the post-mortem room of the Charité, those of **Einhorn** in the pathological institute of Munich, the labors of **Kraffe**, **Lange**, **Kümmell**, **Köote**, and others, establish this fact so clearly that we may accept it as final. If now I should attempt to classify the different pathological conditions of which we are speaking, and to answer the question, If we shall interfere by surgical procedures and when shall we interfere? there would appear as the most usual and mild form the recurring inflammations of the appendix which finally close the lumen of the organ. This is accomplished in the greatest number of cases by small particles of fæces and (fæcal calculi) by enteroliths, much less often by foreign bodies, not unfrequent by cicatricial stricture, sometimes, no doubt, by ordinary catarrhal swelling. The integrity of the abdominal walls remains intact, and there is also no exudate upon the peritoneal surface; often, however, there is retention of the secretions and as a consequence there is a small circumscribed tumor which can often be plainly felt. Its position is that of the appendix. In the otherwise normal conditions of the appendix the cæcum in adults is at a point one and five-tenths inches to two inches from anterior superior spinous process in a line connecting this with the umbilicus. In America this point is named after the author who first described it—"McBurney's point." Clinically, the above mentioned conditions are characterized by severe attacks of pain of moderate duration, with only a small amount of exudation or without any at all. At the same time appear the so-called peritoneal cramps, vomiting and meteorisms, usually the lumen will become again open, the mucus or muco-purulent secretion of the appendix which has been confined is emptied into the cæcum and the attack is over. But returns are frequent and after a shorter or longer time it develops into a grave process. These forms appear to be much more common in America, where, on account of a poorly arranged diet and ways of living, chronic constipation is much more general than with us. **Lange** remarks it as being very usual. I cannot speak personally in regard to the prevalence of constipation among us, for it is not often brought to the attention of a surgeon. * * * Now, gentlemen, when a patient, in the course of seven months, has had four severe attacks, as happened in the first case reported, which in spite of his maintaining the greatest quiet, the severest diet, etc., rendered him for the greater part of the time incapacitated for labor, or when, indeed, as in the second case, the increased severity of the attack rendered the danger correspondingly greater, then it is not difficult to reach the determination to operate. But I imagine it would be going too far to operate in each such case before the tendency to recurrence is established by the progress of the case. **Schede** now speaks of opening abscesses where we have diagnosticated pus. This is always to be done, and he discusses the question whether in case of such abscess we are to search long for the appendix. He thinks not, for in many cases it is not to be found; then, too, we should not break up the adhesions of the peritoneum and thus endanger our patient with septic poisoning. **Schede** finally ends his paper by saying that this disease is a most varied one, that of the eighteen cases he reports scarcely two are alike in all respects and no two cases can be handled in the same manner, and that the progress of each case is different from each other.

Dr. Chas. Douglas: This subject is coming very prominently forward as a surgical question. The question which confronts us clinically is, Shall we operate now or shall we treat the case conservatively, that is to say, when shall we and when shall we not operate? This question is still unsettled. I call to mind one instance in which the child was almost dead, but upon the earnest solicitation of the father and against my own judgment and expressed wish, I operated. The appendix was found almost ulcerated across, and imbedded in some hardened fæces, with their ends sticking through the ulceration, were found three bristles, such as might come from a blacking brush. There are also many cases over which we worry a good deal but do not operate upon, that recover spontaneously. When we have a steadily progressing disease in this locality, which at intervals is subject to exaggeration, then we know it is in the fit state for operation. There are many cases also which simulate perityphlitis, but which are due to impacted fæces. These cases clear up as soon as the impaction is relieved. Another case which I call to mind was that of a large accumulation of pus in a man who had long been under homœopathic treatment. I got on well with him until I proposed doing something for him, and although what I proposed was a simple aspiration, he became alarmed and dismissed me. I learned afterward that this large abscess discharged spontaneously through the bowels. He made a good recovery, but the disease returning at a latter date, he finally had to consent to an operation. The question of greatest importance and the one hardest to decide is, When to operate?

Dr. Stoner: I am not acquainted with any fever except typhoid fever in which ulceration of Peyer's patches and the solitary glands occur. I do not think it possible to operate successfully in cases of perforating ulcer in typhoid fever.

Dr. J. B. Newman: **Dr. Smith**'s assertions and **Dr. Tappey**'s translations seem to clash as to the causation of these cases.

Dr. Tappey: **Schede** says that in almost all cases the cause is appendicitis.

Dr. Newman: What was the cause of the abscess in **Dr. Smith**'s first case.

Dr. Smith: It was the extreme muscular exertion during the prolonged skipping which did the damage. **Don M. Campbell**, M. D., Secretary.

STATED MEETING, OCTOBER 31, 1892.

The President, FREDERICK W. MANN, M. D., in the Chair.

DISCUSSION OF PAPERS.

Dr. George W. Stoner read a paper entitled "A Case of General Dropsy."

Dr. C. W. Hitchcock: This is always an interesting subject because these cases invariably tax the ingenuity of the practitioner to the utmost, especially if the disease has a renal or cardiac origin. One case of general dropsy I now recall, had a history dating back many years, and as a cause of the dropsy presented a mitral regurgitation. She had a constant mitral murmur and was at intervals subject to attacks of general dropsy. This was especially the case after several attacks of the grippe from which she suffered. She recovered from many such attaks under the ordinary course of treatment, embracing diaphoretics and heart stimulants. Digitalis was always the heart stimulant to which she responded best. I would here say that in my experience infusion of digitalis has always proved to be by far the best remedy. She, however, finally had an attack from which she did not recover under any plan of treatment which I was able to suggest. Among other things which I tried was diuretine, which at first seemed to have the desired effect, but finally the taste of this drug became so unbearable, even when given in capsules, that it had to be discontinued. I also tried the sulphate of spartein with but indifferent results. She finally passed from my hands under the care of homœopathic physicians. I saw her again to-day, and she is indeed in a pitiable condition. In the temporary case which DR. STONER has reported, the line of treatment which he has laid down is undoubtedly very good, but there are cases which will respond to no plan of treatment.

DR. J. B. NEWMAN: There are a great many causes for general dropsy, such as anæmia and lesions of the heart, liver, kidneys and spleen. Heart, kidney and liver diseases are the most usual causes. I have now a case under observation in which the dropsy is due to a tricuspid regurgitation. It is getting well under the tincture of digitalis, which I think is the best remedy we have, not excepting strophanthus. Digitalis can be used in all cardiac diseases except when the blood pressure is very high. In anæmic cases, strychnine is indicated together with the tincture of the chloride of iron, which is the best preparation of iron we have, probably because the hydrochloric acid which it contains, helps digestion. In dropsy due to kidney disease, the hot, wet sheet pack is a good remedy as are also hot baths, especially in children. Cathartics are indicated to relieve the kidneys and the best remedy for this purpose is the sulphate of magnesia in concentrated solution.

DR. G. W. STONER: I purposely omitted any detailed treatment of dropsy due to chronic renal or cardiac disease because cures are unusual. Castor oil or sulphate of magnesia are efficient, but very unpalatable remedies. Podophylin and cream of tartar lemonade are in my experience the best remedies that can be administered.

DR. E. W. JENKS: In the dropsy following acute desquamative nephritis, the hot air bath is the best remedy I know of.

DR. C. G. JENNINGS: There is a peculiar form of ascites in children due to the enlargement of the lymphatic glands at the point where the portal vein enters the liver. This occurs chiefly in scrofulous children, and none of the usual causes of dropsy can be detected. They best respond to that treatment which is found most serviceable in the enlargement of other glands and which includes a careful regulation of the diet and the administration of cod-liver oil.

DR. G. W. STONER: DR. JENNINGS' report of the exact point where the obstruction occurs is interesting. A case of general dropsy of the fœtus has been reported.

DON M. CAMPBELL, Secretary.

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one instance in which the child was almost dead, but upon the earnest
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hardened fæces, with their ends sticking through the ulceration, were found
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R. STONER: I am not acquainted with any fever except typhoid fever in
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R. J. B. NEWMAN: DR. SMITH's assertions and DR. TAPPEY's translations
clash as to the causation of these cases.

APPEY: SCHEDE says that in almost all cases the cause is appendicitis.

WMAN: What was the cause of the abscess in DR. SMITH's first case.

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STA OCTOBER 31, 1892.

PRESIDE MANN, M. D., IN THE CHAIR.

AP

W. STO f General Dropsy."
HITCHCOCK ject because these
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s a renal o ral dropsy I now

tissue, does occur, but much more seldom. The way in which it happens **Koote** has shown by means of a beautiful experiment, namely, that fluid injected between the folds of the mesentery of the appendix finds its way into the retro-peritoneal tissue. That pus may be found in retro-peritoneal tissue after the cæcum has become adherent and an abscess has then broken through the parietal peritoneum is obvious. Furthermore, all recent investigations and statistics show that what is known as perityphlitis, in by far the great majority of cases does not begin in the cæcum but in the appendix. The arduous labors of **Lang** held in the post-mortem room of the Charité, those of **Einhorn** in the pathological institute of Munich, the labors of **Kraffe**, **Lange**, **Kümmell**, **Köote**, and others, establish this fact so clearly that we may accept it as final. If now I should attempt to classify the different pathological conditions of which we are speaking, and to answer the question, If we shall interfere by surgical procedures and when shall we interfere? there would appear as the most usual and mild form the recurring inflammations of the appendix which finally close the lumen of the organ. This is accomplished in the greatest number of cases by small particles of fæces and (fæcal calculi) by enteroliths, much less often by foreign bodies, not unfrequent by cicatricial stricture, sometimes, no doubt, by ordinary catarrhal swelling. The integrity of the abdominal walls remains intact, and there is also no exudate upon the peritoneal surface; often, however, there is retention of the secretions and as a consequence there is a small circumscribed tumor which can often be plainly felt. Its position is that of the appendix. In the otherwise normal conditions of the appendix the cæcum in adults is at a point one and five-tenths inches to two inches from anterior superior spinous process in a line connecting this with the umbilicus. In America this point is named after the author who first described it—" McBurney's point." Clinically, the above mentioned conditions are characterized by severe attacks of pain of moderate duration, with only a small amount of exudation or without any at all. At the same time appear the so-called peritoneal cramps, vomiting and meteorisms, usually the lumen will become again open, the mucus or muco-purulent secretion of the appendix which has been confined is emptied into the cæcum and the attack is over. But returns are frequent and after a shorter or longer time it develops into a grave process. These forms appear to be much more common in America, where, on account of a poorly arranged diet and ways of living, chronic constipation is much more general than with us. **Lange** remarks it as being very usual. I cannot speak personally in regard to the prevalence of constipation among us, for it is not often brought to the attention of a surgeon. * * * Now, gentlemen, when a patient, in the course of seven months, has had four severe attacks, as happened in the first case reported, which in spite of his maintaining the greatest quiet, the severest diet, etc., rendered him for the greater part of the time incapacitated for labor, or when, indeed, as in the second case, the increased severity of the attack rendered the danger correspondingly greater, then it is not difficult to reach the determination to operate. But I imagine it would be going too far to operate in each such case before the tendency to recurrence is established by the progress of the case. **Schede** now speaks of opening abscesses where we have diagnosticated pus. This is always to be done, and he discusses the question whether in case of such abscess we are to search long for the appendix. He thinks not, for in many cases it is not to be found; then, too, we should not break up the adhesions of the peritoneum and thus endanger our patient with septic poisoning. **Schede** finally ends his paper by saying that this disease is a most varied one, that of the eighteen cases he reports scarcely two are alike in all respects and no two cases can be handled in the same manner, and that the progress of each case is different from each other.

Dr. Chas. Douglas: This subject is coming very prominently forward as a surgical question. The question which confronts us clinically is, Shall we operate now or shall we treat the case conservatively, that is to say, when shall we and when shall we not operate? This question is still unsettled. I call to mind one instance in which the child was almost dead, but upon the earnest solicitation of the father and against my own judgment and expressed wish, I operated. The appendix was found almost ulcerated across, and imbedded in some hardened fæces, with their ends sticking through the ulceration, were found three bristles, such as might come from a blacking brush. There are also many cases over which we worry a good deal but do not operate upon, that recover spontaneously. When we have a steadily progressing disease in this locality, which at intervals is subject to exaggeration, then we know it is in the fit state for operation. There are many cases also which simulate perityphlitis, but which are due to impacted fæces. These cases clear up as soon as the impaction is relieved. Another case which I call to mind was that of a large accumulation of pus in a man who had long been under homœopathic treatment. I got on well with him until I proposed doing something for him, and although what I proposed was a simple aspiration, he became alarmed and dismissed me. I learned afterward that this large abscess discharged spontaneously through the bowels. He made a good recovery, but the disease returning at a latter date, he finally had to consent to an operation. The question of greatest importance and the one hardest to decide is, When to operate?

Dr. Stoner: I am not acquainted with any fever except typhoid fever in which ulceration of Peyer's patches and the solitary glands occur. I do not think it possible to operate successfully in cases of perforating ulcer in typhoid fever.

Dr. J. B. Newman: **Dr. Smith**'s assertions and **Dr. Tappey**'s translations seem to clash as to the causation of these cases.

Dr. Tappey: **Schede** says that in almost all cases the cause is appendicitis.

Dr. Newman: What was the cause of the abscess in **Dr. Smith**'s first case.

Dr. Smith: It was the extreme muscular exertion during the prolonged skipping which did the damage. **Don M. Campbell, M. D.**, Secretary.

STATED MEETING, OCTOBER 31, 1892.

The President, FREDERICK W. MANN, M. D., in the Chair.

DISCUSSION OF PAPERS.

Dr. George W. Stoner read a paper e [illegible] General Dropsy."
Dr. C. W. Hitchcock: This is always because these
cases invariably tax the ingenuity of the p especially if
the disease has a renal or cardiac origin ropsy I now

PROFESSIONAL ADVERTISING.

THE subject of advertising is, at present, a vexed question, and various opinions have recently been set forth by persons well known and qualified to speak on the matter. Both sides of the problem have been well cited by supporters of and those against the idea of doctors building up a practice through the instrumentality of means which many consider pertain only to mercantile pursuits, but the matter still remains in its old rut as none of the authorities will sanction advertising, but, on the contrary, put down in the most emphatic manner any one who attempts to gain publicity by the system alluded to.

HYPNOTISM.

HYPNOTISM is again to the fore, and it would seem that it has the chance of a better hearing now than it has before had, as several eminent men have been giving the subject a considerable amount of their time, which from a pecuniary aspect is valuable.

ITINERANT PHYSICIANS.

IT is a regretable circumstance that many promising and well qualified young doctors are roaming about the country in the same predicament as Mr. Micawber—waiting to see if something will turn up. Sometimes while visiting a friend an accident occurs requiring the assistance of a doctor, and it is then that one begins to believe in the proverb, " It's an ill wind that blows nobody any good," as it has been the good fortune of one or two to get into a practice through a lucky accident.

SWEDISH MASSAGE.

MUSCULAR rheumatism seems to be alarmingly on the increase in these isles and many men have set themselves the difficult task to solve why it should appear in females between the ages of twenty-eight and thirty-five, as this has been noticed and commented upon by two or three of the professors at our universities. The climate is probably (in some measure) to blame. Swedish massage is usually the treatment prescribed, and, seeing that the profession is gradually becoming more and more over-crowded, it is quite a common thing to find an M. B., C. M. acting the part of masseur. It pays. How long it will be a remunerative occupation is a different thing, but what, in these times is a certainty?

Ewoc.

EDITORIAL ARTICLES.

DIET IN FEVERS.

THE matter of diet in fevers is pretty generally supposed to be settled in favor of the exclusive administration of milk. The question whether it be necessary that the food be restricted to fluids was recently discussed at a meeting of the New York academy of medicine, and the views expressed by experienced men revealed some striking fluctuations of opinion regarding our present ideas of maintaining an exclusively milk diet in typhoid and other continued fevers.

Whatever may be the value of a fluid food in fever, it was shown in the first place that milk should not be regarded as solely a fluid food, and moreover that in the physiological processes of digestion milk is changed into a bulky solid. To maintain nutrition is one of the main objects of the treatment of typhoid. A diet of milk not only requires the ingestion of a large amount in order to insure the administration of the necessary quantity of nutriment, but the amount so administered dilutes the digestive juices to a formidable degree. That fluids are called for in typhoid cases seems indicated by the fact that the amount of water in the system is considerably reduced, as exemplified in the larger number of corpuscles in a drop of blood. This point could be met, in the administration of solid food, by accompanying it with an abundance of water. The two main indications in the dietetic management of continued fevers, are the maintenance of a high rate of nutrition, and the avoidance of the formation in the digestive tract of harsh masses which might scrape or irritate ulcerated surfaces and conduce to hæmorrhage. Chocolate, scraped meats, junket, or baked potatoes do not, as far as known, produce any digestive residues of an irritating nature, and there would seem no actual good reason why they should not be employed in dietaries unless accumulated experience tends to impugn the sagacity of such a line of action.

There seems little question that typhoid cases are sometimes prolonged and tend even to assume a final septic or scorbutic stage from malnutrition of the patient. In these cases it may be well to remember that while milk will always be the best general food in typhoid, there are substitutes and adjuncts which are universally accessible and can be made distinctly serviceable to the patient.

EDITORIAL BREVITIES.

LEGAL AND MEDICAL FEES.

THE lawyers have arranged some of the affairs of this world to suit their own convenience, and one of these is undoubtedly the matter of fees. The slayer of Jim Fisk paid his lawyer about two hundred thousand dollars. The late Hall McAllister received a fee of twenty thousand dollars in a suit in which he did not appear in court, and in which his labor did not equal that of a surgeon in any capital operation. Physicians' fees are far too low, and every endeavor should be made by medical societies and other professional agencies to increase them. The fee bill to be adopted by a local medical society will, it is hoped, tend to exalt physicians' opinions of the value of their own services.

NATIONAL QUARANTINE.

THE late cholera scare has had the merit of exciting public attention in sanitary matters. A bill is already before the house of representatives having for its purpose the promotion of a system of national quarantine. The measure projects the establishment of a bureau of health, the executive portion of which is to consist of a commissioner of quarantine, a commissioner of internal sanitation, and a commissioner of vital statistics, who are each to receive a salary of seven thousand dollars. Centralization of authority is probably the only way by which uniformity of action can be maintained. The governor of New York seems to think the state is competent to attend to its own sanitary affairs; so it may be, but does it possess a vital interest in the interests of other states? There is no good reason why national quarantine or national sanitation should not be as effective as national defense.

THE COMPARATIVE MERITS OF ANTIPYRETICS.

THE contribution made by Drs. David Cerna and William S. Carter to the definite knowledge of the action of antipyretics is valuable. In a study of the comparative action of antipyrin, phenacetin and phenocoll they find, in regard to heat phenomena, that all three fail to produce any effect on the heat functions of the normal animal. Antipyrin produces a fall of temperature due to increase of heat distribution with a fall in heat production. Phenacetin acts similarly to antipyrin, though delayed in its action due to insolubility of the drug. Phenocoll produces a decided reduction the first hour of administration, due to diminished heat production, without change in heat distribution.

MEDICAL NEWS.

TYPHUS FEVER has made its appearance in New York city.

SIR RICHARD OWEN, the distinguished anatomist, died in London, December 9.

THE comma bacillus does not thrive on curare, neither does it on tobacco.

RUSSIA will soon have an inebriate asylum—the first one established in that country.

THE physicians of New York have the right to cross the line of any parade or procession.

MISS GARRETT, of Baltimore, has given two hundred thousand dollars to the Johns Hopkins hospital.

BERLIN has one hundred and eighty-three polyclinics and is beginning to think the thing overdone.

A CHLORODYNE habitué died recently in Wales who used to take every week about five ounces of the drug.

DURING the past few weeks several hundred deaths have occurred from typhoid fever in San Luis Potosi, Mexico.

INDIANS are said to take very kindly to anæsthetics and once they have seen them used desire them for trivial purposes.

A DAY in bed once a month is prescribed for the overworked physician as something better than an annual vacation.

DR. JOHN RIDLON, of Chicago, has been appointed professor of orthopedic surgery in the post-graduate school of that city.

THE Presbyterian hospital, of Chicago, has established a special and detached ward for the care and treatment of consumptives.

ON the ground that its title and contents conflict, the medical practice act of South Dakota has been declared unconstitutional.

MEDICAL students who served in the Hamburg hospitals during the cholera epidemic are to be remunerated for their work at the rate of twenty marks a day.

A GIFT of one hundred and twenty-five thousand dollars was recently received by the medical college of the Western Reserve university.

CHOLERA INOCULATION.—Dr. Haffkine, of the Pasteur institute, is about to proceed to India to apply his method of dealing with cholera endemics.

AT the recent meeting of the Intercolonial medical congress of Australia six hundred members were present and one hundred and sixty papers were read.

THERE are seventy female physicians in London, five in Edinburgh, two in Dublin, thirty-five in Paris, one in Algiers, and two thousand in the United States.

THE cost of conducting the *Journal of the American Medical Association* for one year is thirty-three thousand, four hundred and seventy-nine dollars and ninety-one cents.

THE highest legal tribunal in Germany has decided that legal human life does not begin in the fœtus until labor has set it, and that its destruction before full term is not murder.

AT the recent meeting of the American electro-therapeutic association Dr J. H. Kellogg, of Battle Creek, Michigan, was elected a member of the executive committee for 1893.

DR. HENRY T. BYFORD, of Chicago, has been elected to the chair of gynecology in the college of physicians and surgeons, of Chicago, vice Dr. A. Reeves Jackson, recently deceased.

A BILL will be introduced into the Nebraska legislature, the purport of which is to amend the law relative to capital punishment by substituting death by electricity in place of hanging.

GOOD work is being done by the anti-tuberculous league of France, who have distributed over two million, six hundred thousand circulars giving practical information on preventive measures.

A ROYAL HEART FOR SALE.—The heart of the Dauphin, the son of Louis XVI and Marie Antoinette, preserved in alcohol since the death of its owner ninety-seven year ago, is for sale at auction.

A CONFERENCE on cholera was held in Saint Petersburg last month. It was called for the purpose of instituting precautions against the expected outbreak of the disease which is likely to occur next year.

THE Columbian exposition will have a bureau of hygiene and sanitation. It will aim "to show as adequately as possible the position in which the theory and practice of hygiene stands at the present day."

THE hospitals of New York city have been ordered by the fire commissioners to comply with a new law passed by the legislature, which calls upon them all to have a night watchman and a gong and annunciator apparatus.

A NEW medical law in France abolishes the grade of officier de santé, and requires anyone desiring to practice medicine in that country to possess a diploma obtained by examination before the faculty of medicine. Certain parts of the examination are not required of foreigners who possess a medical degree.

HARD TO PROVE.—A man recently brought suit to recover damages from the keeper of a restaurant for injuries sustained in swallowing a needle in his food. He could bring forward no evidence that the needle was in his food.

A STRANGE LAWSUIT.—A merchant of Dayton, Ohio, had his kidney removed by a surgeon. His attending physician claims the healthy kidney was removed. Suit is instituted to recover the kidney now in possession of the surgeon.

THE deaths from surgical operations in New York city, says the *New York Medical Journal*, in 1891, were one hundred and thirty-three. Ten per cent. were due to the operation of circumcision, performed, it is presumed, in these cases, by Rabbis.

THE WORLD'S FAIR AND PATENT MEDICINES.—"Articles that are in any way dangerous or offensive, also patent medicines, nostrums, etc., empirical preparations whose ingredients are concealed, will not be admitted to the exposition," so reads Rule XV of pamphlet on "Classification."

DR. BERVAH A. WATSON, of Jersey City, died on December 22, aged fifty-six years. He has achieved distinction in the profession through his medical works. During the rebellion he was an army surgeon of prominence, and at the time of his demise was a leading practitioner.

THE university of Edinburgh has decided to grant diplomas to specialists. Regular medical graduates who have taken the required five years' course for the degree of M. D., may become applicants for special degrees by pursuing a one-year course of study in the branch of their choice.

RUSSIA has indefinitely postponed the establishment of separate medical schools for women. The project has been set aside through the influence of the minister of religion, who views the higher education of women in an unfavorable light, being of the opinion that the study of medicine leads to materialism and nihilism.

FIAT JUSTITIA.—It is said by those in charge of the silver statue of "Justice," now being made as Montana's mining exhibit at the World's Fair, that Miss Ada Rehan, of New York, was chosen as the model, because out of the sixty-eight measurements which mark the standard of perfect womanhood, in sixty-two she conformed to the requirements, and in none of the other six did she deviate one-quarter of an inch from the standard.

THE number of medical practitioners in each of the ten principal cities of Italy is as follows: Turin, with a population of 613,995, has 431 doctors; Genoa, with 425,854, has 240; Milan, with 275,164, has 391; Venice, with 149,686, has 124; Bologna, with 354,584, has 215; Florence, with 539,855, has 281(?); Rome, with 507,504, has 506; Palermo, with 486,448, has 316; Messina, with 238,294, has 117; Naples, with 678,891, has 1,323.

THE committee on membership of the American pharmaceutical association is anxious to present, at the Chicago meeting next August, a long list of names of reputable pharmacists of the United States and Canada. Blank applications and full information regarding fees, benefits of becoming a member, etc., can be obtained by addressing the chairman of the committee, Dr. H. M. Whelpley, 2342 Albion Place, Saint Louis, Missouri.

San Francisco has a greater number of opium smokers and opium dens than any other civilized city in the world. Over five hundred thousand pounds of smoking opium entered that port during the past eight years, fifty thousand pounds of this amount having landed during the first six months of last year. Nearly all of this enormous quantity is smoked in the golded state.

Professional advertising recently received condemnation from the San Francisco county medical society in a resolution which declared "That any member of this society whose name shall appear in the daily press, describing his professional powers in an unprofessional manner, and who cannot give a satisfactory explanation of the same, shall, at the next meeting, be expelled from the society." Several members have already been expelled for periods varying from thirty to ninety days.

At the annual meeting of the trustees of Saint Luke's hospital, Chicago, it was shown that during the year one thousand, five hundred and four patients were admitted, fifty-eight per cent. of them being cured, and ten per cent. meeting with fatal results. The receipts were forty-seven thousand, three hundred and forty-three dollars and seventy-nine cents, and disbursements fifty-six thousand, five hundred and ninety-nine dollars and thirty-nine cents. The cases treated at the dispensary numbered five thousand, nine hundred and thirteen. Legacies received during the year aggregated fifty thousand dollars.

The French benevolent society of San Francisco have decided to erect a magnificent two hundred thousand dollar hospital. It will be built on the pavilion plan and will comprise seventeen buildings, besides operating rooms, laboratories, porter's lodge, and stable accommodations for horses and carriages. It will have a capacity for one hundred and fifty patients, twenty-five beds being for chronic cases, one hundred for the different wards, and twenty-five for pay patients. One pavilion will be given to female patients, and another to surgical cases. There will be six beds for contagious diseases, twelve for tuberculosis, and twenty for surgical cases.

During the year ending September 30, the receipts of the Illinois training school for nurses, located at Chicago, aggregated twenty-six thousand, two hundred and sixteen dollars and sixty-nine cents. The expenditures for the same period were twenty-eight thousand and twelve dollars and fifty-two cents. These figures show a deficit of about two thousand dollars. The Cook county hospital paid thirteen thousand, five hundred and seven dollars and thirty-three cents, and the Presbyterian hospital twelve thousand, one hundred and twenty-nine dollars and thirty-six cents to the school during the year for nurses. The cost of maintaining the training school was eighteen thousand, seven hundred and ninety-seven dollars and fifty cents; hospital expenses about four thousand, five hundred dollars.

A structure devoted to children and their interests is to be erected and equipped at the Columbian exposition by the board of lady managers. The following information from their circular will be of interest as showing the scope of the work undertaken: "A series of manikins will be so dressed as to represent the manner of clothing infants in the different countries of the world, and a demonstration will be made of the most healthful, comfortable, and rational system of dressing and caring for children according to modern scientific theories; while their sleeping accommodations, and everything touching their physical interests, will be discussed. Lectures will also be given upon the development of the child's mental and moral nature by improved methods of home training. The building will have an assembly room containing rows of little chairs, and a platform from which stereopticon lectures will be given to the older boys and girls, about foreign countries, their languages, manners, and customs, and important facts connected with their history. These talks will be given by kindergartners, who will then take the groups of children to see the exhibits from the countries about which they have just heard. This audience room will also be available for musical, dramatic, and literary entertainments, which will be carefully planned to suit the intelligence of children of varying ages. One of the numerous associations interested in such work will probably conduct a crèche, where young children can be left in the care of experienced nurses, who will provide for all their wants while their mothers are visiting the various departments of the exposition. On the ground floor of the building there will be a large square court, which will serve as a play-ground for the children."

THE medical society of the state of Pennsylvania has prepared a bill for presentation to the legislature which has for its purpose the establishment of a medical examining board. The following abstract will serve to show the purport thereof: "(1) The board shall consist of nine members, graduates of some legal medical school, no two of whom shall be residents of the same county, and none of whom shall be a member of the faculty or staff of any medical school or university. (2) The members shall be appointed by the governor by and with the advice and consent of the senate. (3) Only physicians commencing practice in Pennsylvania after July 1, 1893, shall be examined in anatomy, physiology, chemistry, pathology, hygiene, toxicology, differential diagnosis, surgery, and obstetrics; and each applicant, upon receiving from the secretary of the board an order for an examination, shall draw by lot a confidential number, which he or she shall place upon his or her examination paper, so that when said papers are passed upon by the examiners the latter shall not know by what applicant said papers have been prepared, and upon each day of examination all candidates shall be given the same set of questions. (4) The examination papers and marks shall be preserved and shall be open to public inspection in case of dispute. No one shall be excluded or rejected on account of adherence to any special system or school of practice. (5) Each applicant who shall have passed a satisfactory examination shall receive from the said board under seal a license to practice medicine and surgery in the commonwealth of Pennsylvania. (6) Nothing in this act shall be construed to prohibit service in cases of emergency or the domestic administration of family remedies. (7) The applicant shall pay an examination fee of ten dollars, and in case of failure at any examination shall have the privilege of subsequent examinations without the payment of an additional fee." The bill is endorsed by the Jefferson medical college, the University of Pennsylvania, the Woman's medical college, and the Polyclinic, of Philadelphia. There are nine hundred and thirty-two undiplomaed quacks in Pennsylvania, and about two hundred and twenty-two more who are practicing on diplomas purchased from bogus medical colleges.

RECENT PUBLICATIONS.

REVIEWS.

DISEASES OF THE LUNGS, HEART, AND KIDNEYS.*

DR. DAVIS has elaborated his lecture notes into a monograph upon the diseases of the important viscera mentioned in the title. The text is an admirable résumé of the essential points in the pathology and treatment of these diseases. The volume forms a worthy member of that excellent series, the Physicians' Reference Series.

* By N. S. Davis, Jr., A. M., M. D., professor of principles and practice of medicine, Chicago medical college; physician to Mercy hospital; member of the American medical association, Illinois state medical society, Chicago medical society, Chicago academy of sciences, Illinois state microscopical society, fellow of the American academy of medicine; author of "Consumption, How to Prevent it and How to Live with it," etc. Number XIV, in the Physicians' and Students' Ready-Reference Series. In one neat 12mo volume of three hundred and fifty-nine pages. Extra cloth, $1.25 net. Philadelphia: The F. A. Davis Company, 1231 Filbert street.

THE STUDENTS' QUIZ SERIES.*

THE new series of quiz compends now being issued by Messrs. Lea Brothers are rapidly covering the field embraced in a medical education. The last two numbers deal with anatomy in a substantial double number, and diseases of children. The manual will be found to be based on all that is modern in medical knowledge, and will fulfill the needs of the students in all the purposes for which such manuals are used.

* Edited by Bern B. Gallaudet, M. D., demonstrator of surgery, college of physicians and surgeons, New York. Volume XIII.—DISEASES OF CHILDREN, by C. A. Rhodes, M. D., instructor in diseases of children, New York post-graduate medical school. Pocket size, 12mo. One hundred and seventy pages. Limp cloth, $1.00. Philadelphia: Lea Brothers & Company, 1892. Volume I. —ANATOMY, by F. J. Brockway, M. D., demonstrator of anatomy, college of physicians and surgeons, New York, and A. O'Malley, M. D., instructor in surgery, New York polyclinic. Limp cloth, $1.75. Double number. Philadelphia: Lea Brothers & Company.

ONE THOUSAND PRESCRIPTIONS.*

THIS little manual of one thousand prescriptions will prove interesting and useful and will no doubt be a source of suggestiveness to those troubled with therapeutical despair. It contains a vast number of celebrated remedies. The use of one language would have given uniformity to the work and would have saved the insertion of many faulty and polyglot combinations. However, this fault will more than be atoned for in any service the book may render its reader.

* Over one thousand prescriptions and favorite formulæ from authors, professors and practicing physicians. Cloth, 12mo, postpaid, $1.00. *The Illustrated Medical Journal* Company, Detroit, Michigan.

MANUAL OF PRACTICAL MEDICAL AND PHYSIOLOGICAL CHEMISTRY.*

THE manual of chemistry now before us is an admirable example of what a course of chemistry should consist in for those students who intend to follow the calling of physician rather than chemist. Primarily dealing with physiological chemistry, the work seeks to exclude the non-essential portions of inorganic chemistry, the author believing that in most courses for students there is too little medicine and too much pure chemistry. The part dealing with the urine, with the food-stuffs and their assimilation, with water analysis, and the organic ferments and juices, will make the work especially valuable not only to the medical student but to the general practitioner as well. The book is amply illustrated and well and serviceably bound.

* By Charles E. Pellew, E. M., demonstrator of physics and chemistry in the college of physicians and surgeons, New York. Illustrated. Cloth. Three hundred and seven pages. D. Appleton & Company, New York.

TEXT-BOOK OF OPHTHALMOLOGY.*

THIS translation of Professor Füch's "Lehrbuch der Augenheilkunde" will be welcomed by every practitioner and student of ophthalmic science. The repute of its author will ensure attention to his views. The text is admirably translated and the clear, concise and forcible style which the translator so much commends in the original is very happily transferred to the American edition. The whole field of ophthalmology is carefully traversed in the present volume. The work is amply illustrated and the translator has added a useful appendix containing illustrative cuts of ophthalmic instruments.

Nothing but success can be predicted for the manual.

* By Dr. Ernest Fuchs, professor of ophthalmology in the university of Vienna. Authorized translation from the second enlarged and improved German edition, by A. Duane, M. D., New York. Illustrated. Cloth. Seven hundred and eighty-eight pages. D. Appleton & Company, New York.

ASHEVILLE OR SKY-LAND.*

A DESCRIPTION and guide to that now famous health resort, Asheville, is furnished in the souvenir pamphlet of Miss Sawyer. The illustrations are very pretty, and to some extent support the claims which are made for nature's favors to the region in biblical rhapsody by the author.

* By Miss Harriet Adams Sawyer. Nixon-Jones Printing Company, Saint Louis, Missouri.

FISSURE OF THE ANUS AND FISTULA IN ANO.*

THE important subjects of anal fissure and fistula are commented upon in the present number of the Physicians' Leisure Library Series, in a manner calculated to enforce the importance of correct diagnosis in rectal diseases. The various operative and therapeutic measures applicable in these diseases are carefully and lucidly enumerated in Dr. Adler's little book.

* By Lewis H. Adler, Jr., M. D. George S. Davis, Detroit.

LEONARD'S PHYSICIANS' POCKET DAY-BOOK.*

THIS convenient day-book is in its fifteenth year of publication. It is good for thirteen months and can be begun any time, thus differing from the annual visiting lists. It contains the information in the form of tables usually carried about in the *vade mecum* of the physician and will in every way be found to fulfill the needs of a pocket book-keeper.

* Bound in red morocco, with flap, pocket, pencil loop, and red edges. Price, postpaid, $1.00. Published by *The Illustrated Medical Journal* Company, Detroit, Michigan.

ACNE AND ALOPECIA.*

THE reason why acne and alopecia are given consideration together is found, according to the author, in the great frequency of the two conditions and the difficulties encountered by the general practitioner in their management. The two subjects are here briefly and tersely described, and the remedial measures indicated by one having authority in such matters.

* By L. Duncan Bulkley, A. M., M. D. George S. Davis, Detroit.

THE PHYSICIANS' VISITING LIST.*

OUR old friend, the "Physicians' Visiting List," puts in its familiar appearance once more. To those who know it, it needs no recommendation. Those who may be looking for a visiting list, this one, with its prestige of forty-two years of existence, will be found all that can be desired.

* Lindsay & Blakiston's. Forty-second year of publication. Price, $1.00 and upward. P. Blakiston, Son & Company, Philadelphia.

THE MEDICAL NEWS VISITING LIST FOR 1893.*

THIS excellent visiting list comes to us unchanged in form and fashion from those of previous years, and as its friends think no change will improve it they will doubtless give it the welcome and patronage to which an old friend is entitled.

* Weekly (dated, for thirty patients); monthly (undated, for one huudred and twenty patients per month); perpetual (undated, for thirty patients weekly per year); and perpetual (undated, for sixty patients weekly per year). The first three styles contain thirty-two pages of data and one hundred and seventy-six pages of blanks. The sixty-patient perpetual consists of two hundred and fifty-six pages of blanks. Each style in one wallet-shaped book, pocket, pencil, rubber, and catheter-scale, etc. Seal grain leather, $1.25. Philadelphia: Lea Brothers & Company, 1892.

THE ANATOMY OF THE PERITONEUM.*

THE difficulty students of anatomy experience in comprehending the arrangement of the peritoneum is sought to be overcome in Dr. Dexter's little book. Believing that the matter should be an affair of the understanding rather than of the memory the author seeks to familiarize the student with the development of the peritoneum thus furnishing him the key whereby to unravel the arrangement of folds which become so bewildering to the student. The book is embellished with thirty-eight colored illustrations, so that the eye is made thoroughly instrumental to the acquisition of the knowledge it contains. Students and surgeons whose work makes an accurate knowledge of the peritoneum necessary will appreciate this book.

* By Franklin Dexter, M. D., assistant demonstrator of anatomy, college of physicians and surgeons, New York. Cloth. Thirty-eight illustrations. D. Appleton & Company, New York.

MEDICAL PROGRESS.

MEDICINE.

OVER-PRESSURE IN CHILDREN CAUSING BRAIN MISCHIEF.

THE following cases show the inadvisability of attempting to force children forward in schools without sufficiently considering their different individual capacity for learning.

It is, I am afraid, much too common a cause of children's ailments nowadays, and has not been quite enough considered, I think, by parents and teachers. In the ordinary board school, as at present constituted, every child in each standard must be pushed on, *pari passu*, with all the others, so as to get all, if possible, passed at the examination next ensuing, into the standard above. In the first case here noted, the fault, *fons et origo mali*, was with the parents in sending such a young child to school at all, but as both parents were factory workers, and there was only a slightly older boy besides, the child went to school with him.

Both cases were very similar in the outset, but the first was the most severe, and in both I thought at first the illness was enteric fever, the more so as being next door neighbors and residing on the banks of the river, which is very foul and much polluted, and on Sundays, when the water is low great banks of festering abominations are exposed.

Case I.—Alf. C., a sharp and more than usually intelligent little boy, of only four years and eight months, was seized on April 3, at breakfast time, with sickness and pain in the head. He had been attending school for six months, and being naturally quick, as I have said, he had been encouraged to learn, and had already reached the final class in the infant department, and would have been put into the general school but for his age, which forbade it.

When I saw him at 11 A. M., he was in bed, slightly flushed, head very hot, and temperature 99.2°. Tongue rather foul. Complains of pain in the head, and avoids light. No further vomiting since breakfast. Gave him a mixture of potassium citrate and tincture of aconite and calomel, one grain, with sugar.

April 4: Passed a bad night, rambling and talking about school. Tongue rather cleaner. Temperature 99.4° Milk diet. To continue mixture. Night temperature same as morning. Added potassium bromide, two grains.

April 5: Night passed much the same as last. Lies very quiet and still, but easily roused, and then quite conscious. Temperature 100.2°. Thirsty. Tongue furred, but moist. No pain in abdomen. Stool natural. Ordered antipyrin, five grains every three hours. Temperature at night 100°. Been delirious all afternoon. Ordered ice-bladder to head.

April 6: Rather better this morning. No diarrhœa. No spots on abdomen. Head, however, very hot, mother having taken off ice-bag at 4 A. M., as child slept. To be replaced. To have five minims bromidia (Battle) every two hours. Temperature 100.2°; night temperature same.

April 7: Much better. Fairly good night. Slept four hours; from 12, midnight, to 4 A. M. Playing with toys on bed when I saw him. Temperature 99.2°. Tongue cleaner. To continue bromidia mixture.

April 8: Not quite so well. Ice-bag again neglected, to my vexation. To be continued, as also mixture.

April 9: Much better. Sitting up playing. Temperature 99°. Ice-bag discontinued. Same mixture.

April 10: Improving fast. Not much appetite. Quinine, one-half grain, t. d. s.

April 11: Up and dressed. Still improving. No headache or pain. Temperature normal. With the exception of a slight cough all went on well until the 14th, when I discontinued visiting.

The good effect of the ice and bromidia was very quickly apparent in this case, as also in the next.

Case II.—John B., a strong, sturdy, rough lad of just over seven years of age, was a contrast to A. C., in that he was anything but fond of lessons, and rather dull in all subjects except drawing, in which he excelled.

He had failed last year in the examination, and in consequence his teacher had been urgent as to the necessity of his passing this time, and had been, perhaps, rather too sharp on the lad.

Just a fortnight before the examination, on April 21, he was seized, also at breakfast time, with vomiting and pain in the head.

When I saw him in the forenoon he was lying on a bed-chair, very drowsy, and resenting being roused. He vomited every few minutes since breakfast, at which he had only drank a cupful of coffee. Head very hot. Pupils contracted; buries his face in the pillow. Temperature 100°.

Ordered cold water cloths to head until ice-bladder could be got, and a potassium citrate mixture.

April 22: Sickness relieved. No delirium, but wanders when roused, and talks of his play. Ice to head. Bromidia, five minims, every two hours. Night much the same. Temperature 100°.

April 23: Much better. More easily roused, and sensible, though when left to himself lies quiet for hours. Temperature 99°. To continue bromidia and ice.

April 24: Better. Sitting up in bed with his drawing-book. No dulness or drowsiness. Complains of no pain at all. Appetite not good. Quinine, one-half grain, t. d. s.

April 25: Appetite improved. No bad symptoms. Temperature normal. Playing about the bed-room.

April 26: Ceased visiting. Boy going on well.

It seems curious to me that two lads of such opposite temperaments should be so similarly attacked. One sharp and intelligent, though very young and not compelled to learn; the other older and duller, probably harassed by his teacher and yet both develop almost the same symptoms. I may say that the younger child, a fortnight after I ceased seeing him, had a regular hysterical fit because his mother would not allow him to go to school with his brother, and was in a state of collapse, cold and pale, for two or three hours after.

The rapid improvement under the ice and bromidia treatment was very gratifying, and I have found bromidia especially useful in such cases, and a very reliable hypnotic whenever I have required to prescribe such a medicine.—*The Hospital Gazette.*

PROSTITUTION AND THE PUBLIC.

THE subject of prostitution has been forced into public attention of late. As is well known, an eminent clergyman of this city—deservedly esteemed for the sincerity and uprightness of his character, as well as for his eloquence and determined purpose—has been trying to prove three things: (1) That the New York police department receive fees or bribes from the brothels, saloons, and gambling houses of the city; (2) that they know of the existence of these places, yet do not close them up, or restrict their activity, as the law directs; and, (3) that they ought to be closed, or restricted more thoroughly. The police department naturally deny the bribe-taking, and they appear to assume the position that brothels and gambling-houses must exist, and cannot safely be entirely suppressed. There is a very wide-spread conviction that the brothels and gambling places do pay tribute, though it is hard to prove; Dr. Parkhurst, however, probably has the sympathies of the public with him in his first indictment.

With regard to the proposal for the entire and immediate suppression of houses of ill-repute, as advocated, the idea is impossible, Quixotic, and dangerous. A study of the subject from a scientific and sociological point of view would convince one of this, even if common sense did not show it. There are, perhaps, over two thousand houses of ill-repute, and twelve or fifteen thousand professional prostitutes in this city. Statistics on the point can only be approximate. These prostitutes represent a special, degenerate, and, in a sense, criminal class. According to Jarnousky, nearly one-half present pronouced stigmata of degeneration; they are more decidedly a class by themselves, an anthropological species, than professional thieves. Over ten per cent. are of illegitimate parentage, a considerable proportion are born of alcoholic, syphilitic, adulterous, or criminal parentage. A large proportion have morbid sexual propensities and crave sexual excesses.

A very typical and instructive history of a prostitute is that of Alphonsine Plessis, a character immortalized and idealized by Alexandre Dumas in his novel and play, "La Dame aux Camellias." Her paternal grandmother, who was half prostitute, half beggar, gave birth to a son by a country priest. This son was a kind of country Don Juan, a peddler by trade. The maternal grandmother was a nymphomaniac, whose son married a woman of loose morals, by whom a daughter was born. This daughter married the pedlar, and their child was the Lady of the Camellias. Said lady had unquestionably the powerful and perverted sexual instincts of many of her class. She died childless, early in life, from consumption; nature thus extinguished the race.

People with the ancestry, the habits, the perverse instincts, of the prostitute class cannot be cured or reformed by the enforcement of municipal ordinances. If taken from their surroundings and placed where they can earn an honest livelihood, they, as a rule, go back voluntarily to their old mode of life. And they do this despite the fact that this life is always a short one, and is sure to end in sickness, degradation, and misery.

It would be absurd to suppose that adultery would be lessened or that prostitutes would cease their work if driven from their houses. A thief is just as much a thief whether in a hotel, a boarding-house, or in his own headquarters. All that municipal authorities can do as yet is to reduce the number as much as possible, make prostitution difficult, and prevent the disorderliness and the grossly lascivious performance which it has been shown are carried on in some places. This is not beyond the power of an efficient police.

As to the plan of licensing the brothels, Superintendent Byrnes would not have recommended this if he had made himself more familiar with the working of such methods elsewhere. It has been found that licensing has a tendency progressively to lessen the number of public houses; the women refuse to be registered, inspected, and have their liberty restricted, They go off to other places. This has been the experience in Paris; and such is the conclusion recently reached by Dr. O. Lassar (*Annals de Hygiène Publique*, November, 1892), who has been investigating the subject. In fact, by a curious *contretempts*, Superintendent Byrnes has proposed a remedy which would do eventually exactly what he blames Dr. Parkhurst for attempting now, namely, it would drive the prostitutes out among tenement, apartment and boarding houses.—*Medical Record.*

RHEUMATISM IN CHILDREN.

THE study devoted during recent years to the diseases of children has materially broadened our ideas of disease in the adult. The delicate tissues of the child, unchanged by previous disorders, enable many diseases to express themselves with far more clearness than the more stable tissues of the adult do. In no condition is this truer than in rheumatism. Viewing that disease only as it appears in the adult, we must accept the old idea that it is not common during childhood. In the light of broader knowledge we must admit that it is common and very important. We have learned that rheumatism is the cause of numerous phenomena not limited to the fibrous tissues and the joints. This disease as it appears in the child confirms the belief that amygdalitis, purpura, erythema, chorea, and pleurisy may all be rheumatic manifestations. These various conditions in adult life are grouped and appear massed together, and are usually subordinate to the arthritis. In early life they are frequently isolated and appear singly, the interval between the various manifestations being variable. They follow each other in no regular order, and no two cases pursue exactly the same course. The fact has recently been emphasized that in children the phenomena may be distributed over years instead of weeks or months, and the history of rheumatism may be the history of a whole childhood. In adults, in whom the arthritis is the central and all-important symptom, these various manifestations appear as complications. In children they cannot properly be considered as such. They more frequently overshadow the arthritis and are the direct result of the rheumatic poison. This great variability in symptoms renders it difficult or quite impossible to describe a typical case of rheumatism in childhood, yet it would be an error to suppose that the disease is necessarily obscure or impossible of diagnosis. Error in diagnosis results not so much from lack of characteristic symptoms as from the fact that the physician is looking only for the symptoms he has been accustomed to see in the adult.

The arthritis of children usually assumes the form which in the adult is known as subacute. A single joint only may be affected. There may be stiffness and soreness and perhaps a little swelling, but rarely redness. The duration of these symptoms is short, being sometimes limited to a few hours. In some instances the tendons are affected while the joints escape. The tendons of the neck and those back of the knee are most frequently involved. Recurring amygdalitis is unquestionably an expression of the rheumatic diathesis and is frequently the ushering-in symptom of acute rheumatism. A symptom rare in the adult, but occurring frequently in children, is the development of fibrous nodules. These are little rounded bodies appearing usually about the joints. They are most common on the margins of the patella, at the elbow, along the vertebræ and clavicle, and in the extensor tendons of the hand. They are neither painful nor tender. They appear suddenly, sometimes in successive crops, but are slow in disappearing. Their close association with rheumatism is undoubted. Purpura is a common manifestation of rheumatism in children and young adults, and may occur entirely apart from other symptoms. The relation of chorea to rheumatism is well known. It is not always rheumatic in origin, but rheumatism is by far the most frequent and potent factor in its ætiology. Pleurisy is undoubtedly in some cases a direct result of rheumatism, and is a serious complication. Cardiac disease is the most prominent feature of rheumatism in childhood. No attack is too mild to preclude the possibility of cardiac involvement. A murmur may appear and cardiac valvular disease develop during the course of a torticollis. It is this danger of the development of heart disease that renders rheumatism during early life not simply a troublesome and painful malady, but an insidious and dangerous disease, to be detected as early as possible and combated by every means at our command.—*New York Medical Journal.*

SURGERY.

TREATMENT OF ANEURISM AND OF HÆMORRHOIDS BY HYPODERMIC INJECTION OF BLOOD-CLOT.

I RECENTLY presented a paper on this subject before the East Tennessee medical society, but thinking the method shows great promise of usefulness, I send it to your journal for publication also.

As there is no method possible for treating aneurisms that does not involve either clotting of the blood in the aneurism, or obliteration of the artery, there can be no valid objection to *clotting blood outside of the artery*, and *then introducing it* where required, by a syringe and hypodermic needle.

My plan is, after using aseptic precautions, to—

(1) Draw blood from the patient's arm, the arm of a friend, or, admissibly, from a beast or bird.

(2) Clot this blood, or allow it to clot spontaneously.

(3) Strain off the serum.

(4) Inject at the distal side of the aneurism.

Before puncturing with the needle, deaden the skin with a four per cent. solution of cocaine, and fill the aneurism at one injection. It will be well to check the current in the artery before injecting, either by tourniquet or manual pressure.

I *propose the same clot injection for hæmorrhoids* in place of astringents or carbolic acid, which can do no more than originate a clot. Why not use a clot "at first hand?"

Finally, I wish some one to apply the clot injection into the bleeding mouths of arteries, or probably better, by needle puncture of artery and hypodermic injection above the seat of injury. Should the method be tried on varicose veins, special care will be necessary, as here we have an increased danger from embolism.

Of course aneurisms are, and may be, safely punctured, for this has been done for years when using electricity, and I have had no trouble in passing blood-clot through needles.

I hope such surgeons as have an opportunity will put these ideas on trial and report results.—Dr. G. K. Turner in *Virginia Medical Monthly.*

GYNECOLOGY.

THE TAMPON IN MENORRHAGIA.

Is the tampon a childish expedient in recurrent profuse hemorrhages at the menstrual epoch? In certain cases its use has been recommended by Gehrung, by Mays, and by Reeves Jackson. Still, with the profession at large, respect for menstruation as a physiological function has a dominant influence in determining treatment.

I am prepared to admit in advance that, as a rule, menorrhagia is the result of pathological conditions, namely, of inflammatory thickening of the endometrium, with increased vascularity and polypoid growths, and of enlargement of the uterine cavity, with consequent increase of the bleeding surface. The changes in the endometrium may be due to a primary inflammation, or, may be secondary to displacements, to neoplasms, to obstructions of the cervical canal, to connective-tissue changes in the uterine walls, to imperfect involution, and to retention of portions of the ovum following abortions or childbirth. In all these, and in similar instances, a rational therapeusis should unquestionably be directed to the source and origin of the evil.

But there still remain cases in which no definable cause is recognizable. The curette, uterine drainage, and internal remedies fail to afford relief. The recovery of the patient between the menstrual periods becomes more and more incomplete, and the conditions resulting from profound anæmia lead to hopeless invalidism. In such cases the question is often broached as to whether the ovaries had not best be removed. "Normal ovariotomy" is practically devoid of danger. If the removal of the tubes and ovaries is complete the hemorrhage will cease. The relief of suffering following the removal of incurable pus tubes is one of the most brilliant achievements of modern gynecology, and is cheaply purchased by the sacrifice of the ovaries. But in the class of cases under consideration, especially if the patient be young, the loss of the ovaries has not seemed to me to be a matter of indifference. The medical men to whose care these patients ultimately fall will bear me witness that many of them subsequently display symptoms of mental and moral perversity, and that all dislike the thought that they are "different from other women."

For this reason I have been led, when other lines of treatment have proved ineffective, to resort in anæmic patients to the tampon as a means of restraint or repression at the menstrual period. By this plan opportunity is afforded for the continuous repair of the blood, and for the restoration of disordered function. At first it was with a feeling of timidity that I ventured to employ the tampon upon the first evidences of menstruation, but experience speedily showed that the practically complete repression of the menstrual flow is absolutely harmless.

However elementary it may seem, it may be well to state that the method of tamponing is not a matter of indifference. At least, personally, I have only got satisfactory results when following the procedure of the late Dr. Marion Sims. He advised, as material for a tampon, wads of cotton of suitable size soaked in carbolized water and compressed into the form of flattened disks. These, by means of a Sims speculum, should be applied firmly to the vault of the vagina. It is important that they should be placed with the flattened surface in a transverse direction, rather than one parallel to the vagina, and that the packing should be arrested at the urethro-vaginal septum. At the end of twenty-four hours the tampon should be removed, the vagina irrigated, and a fresh tampon should be introduced. When thus employed for forty-eight hours, the flow is usually ended. In rarer cases a third application of the tampon may be called for.

It is interesting to watch, as the result of this plan, the restoration of the patient to health. In time, likewise, the normal tonus of muscular structure of the uterus is restored, and the further use of the tampon ceases to be necessary.

As an illustration of the beneficial workings of the tampon, I select the following instance:

Mrs. F., aged thirty-six years. In girlhood had obstructive dysmenorrhœa, associated with retroflexion and stenosis of the cervical canal, for which she received treatment from the late Dr. Elwood Wilson. At nineteen she married; she had two miscarriages in the first year of her married life; afterward she gave birth to three children at term. During gestation she always experienced a peculiar exhilaration and sense of *bien aise*. With the weaning of her children, which was usually delayed until the second year, the menstrual flow returned, and was characterized by great profuseness. For this the usual remedies, internal and local, were employed, including ergot, viburnum, hydrastis, tannin, cannabis Indica, curetting, and applications of iodine to mucous membrane. All were of no avail. There were no fungous growths obtained by the repeated scrapings. After the birth of the third child I repaired a laceration of the cervix of moderate extent.

The menstrual period lasted from five to six days. For ten days following the patient was compelled by dizziness to remain in bed or upon a couch in the recumbent posture. Gradually a neurasthenic condition developed, characterized by insomnia, multiform neuralgias, palpitations of the heart, and hysterical twitchings. For two years, owing to flatulent dyspepsia, she lived exclusively on a meat diet. Finally she withdrew altogether from society and devoted her entire time to a contemplation of her symptoms. Her weight fell from one hundred and forty to ninety-seven pounds.

From the time of the performance of Emmet's operation, in 1889, she lost faith in medical aid, and was guided in her treatment, for the most part, by the volunteer counsel of non-professional friends. Her husband discussed her case with an eminent gynecologist, who advised removal of the ovaries, but the proposition was promptly and indignantly rejected by the patient, whose maternal instincts were strong.

In January last, when I called to visit one of the children, I was shown by her husband the contents of a chamber, which contained fully a pint of pure blood. Similar losses, he assured me, were the rule at her menstrual periods. I at once introduced a tampon and checked the bleeding. The tampon was renewed upon the two succeeding days, when the flow ended.

Acting upon the theory that the primary cause of the trouble had been protracted lactation, and that its persistence was due, not to any organic disease, but to the relaxed condition of the uterine muscular fibre, I administered iron and food, the latter at first in small quantities at short intervals, and afterward, as her digestion improved, I persuaded her, though with many misgivings on her part, to adopt a mixed diet. Since January, with the return of each period, I have employed the tampon for two days. The patient has gained twenty-two pounds. Sleep, appetite, strength, and color have returned. All her morbid fancies have disappeared. She is one of the happiest women in my *clientèle*, and never ceases to rejoice that she still possesses her ovaries, and that she has not been robbed of the hope of some day again becoming a mother.—Dr. W. T. Lusk in *American Journal of the Medical Sciences.*

THERAPEUTICS.

THERAPY OF PHENACETINE.

PHENACETINE was originally introduced into medical practice as an antipyretic, and subsequently was found to possess analgesic powers. In diseases attended by hyperexia, such as rheumatism, pneumonia, typhoid fever, and phthisis pulmonalis, phenacetine exerts a very happy effect in about half the dose of antipyrine, the ordinary dose being from three to eight grains. The mortality of the typhoid fever in children has been very materially reduced by the employment of phenacetine. The fall of temperature does not occur until half an hour after the drug has been taken and the effect continues from four to eight hours. As an antipyretic, phenacetine is considered by many good authorities as the safest and most efficient member of the aniline group. In epidemic influenza phenacetine rapidly relieves the muscular pains and favors diaphoresis; the catarrhal symptoms subsequently require other remedies.

In ordinary colds one or two five-grain pills of phenacetine remove all symptoms. The combination of salol (or salophen) with phenacetine is especially useful in influenza and rheumatism.

The analgesic effects of phenacetine are very marked in various forms of headache, including migraine and the headaches from eye-strain, having the advantage over antipyrine in not so frequently causing a rash.

In the neuralgic pains of tabes dorsalis, in herpes zoster, and intercostal neuralgia, five-grain doses given every hour for three or four hours, usually afford complete relief and cause sleep.

Phenacetine is extremely useful in chronic neuritis, and according to Kater, is unsurpassed in the treatment of cerebral disorder due to excessive indulgence in alcoholic drinks.

In whooping-cough one-half grain doses dissolved in ten drops of glycerine are readily taken by children and afford prompt relief, permitting sleep and ameliorating attacks.

In delirium a dose of ten grains of phenacetine will usually afford a quiet night.

Mahnert considers phenacetine a specific in acute articular rheumatism, as it reduces fever, relieves pain and lessen the duration of the attacks. It has been found useful in some cases of gonorrhœal rheumatism, and is worthy of more extended trial in this rebellious affection.

Given several hours before the time of the paroxysm of intermittent fever, it prevents the chill.

In insomnia from simply exhaustion, phenacetine acts admirably.—Shoemaker, R., " Materia Medica, Pharmacology, and Therapeutics," Volume II.

TREATMENT OF CYSTITIS.

PROBABLY no disease more severely taxes the skill and therapeutical resources of the physician than the complicated condition of human affairs described under the term "cystitis." It is a disease of various causes—in one sense, and in another, of a comparatively limited number of causes. Doubtless every case of cystitis can be traced to microbic origin. This may have occurred through the use in the bladder of instruments which have not been thoroughly sterilized before using; through the presence of a calculus or other foreign body in the bladder, which, by its mere presence and the irritation it causes, brings about conditions favorable for the growth of micro-organisms, the organisms gaining access to the organ with the urine; and, third, micro-organisms planted there by the disease known as gonorrhœa.

In treating any case of cystitis it is necessary to know which one of these several conditions is to blame for the presence of the micro-organisms in the bladder, but it is of much more importance to know what to do with the micro-organisms. In case a stone or other foreign body is present it should be removed. In case a specific disease, like gonorrhœa, is present, it should likewise be removed. But the mere presence of micro-organisms in the bladder, multiplying in the superabundant mucus which that organ contains when irritated by any cause, is the real source of the distressing symptoms which lead surgeons to look upon cystitis as a serious disease and one difficult to cure.

The first indication in the treatment of a case of cystitis in which no foreign body is present, and in which the symptoms are kept up merely by the presence of micro-organisms, is to render the urine as bland as possible; the second indication is to give such medicines as will diminish the irritability of the bladder and likewise prevent the excessive secretion of mucus; the third is to use such drugs as are inimical to the growth of micro-organisms. For the first indication the use of balsams, of buchu, of cubebs of kava kava, of pichi, of thuja occidentalis, and of ether and chloral hydrate, is to be commended. No drug with which I am acquainted is more useful for the purpose of rendering the urine bland and unirritating than balsam of copaiba, if properly given. But very often the use of this drug is abused. It is given without any reference to its action upon the stomach or other digestive organs, and sometimes it disturbs the digestive process, and the urine in consequence becomes laden with objectionable substances—products of mal-digestion—which are the source of great irritation to the sensitive, inflamed bladder. If combined with an alkali in the form of carbonate of sodium, it will, in many cases, agree well with the digestive functions.

Another drug which is entitled to great respect for this purpose is pichi. This well known Chilian remedy should be given in the form of fluid extract, in ten to twenty drop doses, combined with an alkaline carbonate or citrate. Citrate of potassium is a valuable adjuvant to all of the medicines that may be used for the purpose of diminishing the irritating qualities of the urine.

Kava kava and thuja occidentalis—drugs containing a great deal of resinous matter, which is probably separated in the process of digestion and converted into agents which are, in solution, eliminated with the urine, and which otherwise would render that fluid irritating—should be given in doses of ten to twenty drops. In administering medicines of this class the surgeon should have in mind the fact that they are oftentimes quickly eliminated, and that their effects are quite transient, and in order to get beneficial results it is necessary to repeat the medicine at intervals of at least three hours. One frequent cause of non-success in treatment of cystitis is the fact that drugs are given at too frequent intervals. In my experience, no material advantage can be obtained with medicines given three times a day; they should be given at least every three hours, and in some cases every two hours, during sixteen of the twenty-four hours.

To further aid in rendering the urine bland, copious drinks should be given. The use of distilled water in one-half pint doses every four hours is one of the best remedies. The use of distilled water, perfectly sterilized, increases the volume of the urine materially, and aids in the elimination of the products of digestion and waste thrown out by the kidneys and diminishes the sufferings of the patient afflicted with cystitis.

Then, to diminish directly the irritability of the bladder, one-eighth grain doses of morphine, given at intervals of three or four hours, in combination with the above treatment, is sometimes particularly useful in overcoming tenesmus, which is one symptom in cystitis that causes the patient much distress. Opium combined with camphor, in doses of one grain of the former to two grains of the latter, by suppository per rectum or vagina, ameliorates the distress. These suppositories should be used at least once in six hours. The effect of opium or morphine contained in a suppository is more prolonged than when given by mouth, and this method of applying medicine is therefore to be commended.

Now, for the removal and destruction of micro-organisms in the bladder, which keep up mischief, and which threaten, in many cases, to continue and to extend their baneful influence beyond the bladder into the ureter and the kidney, thereby seriously threatening life, it is necessary to introduce into the cavity of the bladder something that will check their multiplication. If we diminish the quantity of mucus by the treatment already advised, we in a measure limit the multiplication of the micro-organisms, because without the presence of mucus they would not thrive.

We have in the drug known as peroxide of hydrogen a remedy which may be used inside the bladder, providing it is used in a proper manner, and has power to destroy the materials upon which the micro-organisms thrive, and to destroy the micro-organisms themselves. Peroxide of hydrogen should never be used in the bladder unless a large catheter has first been introduced, and unless the catheter has a number of openings which insure the ready escape from the bladder of the detritus resulting from the action of the peroxide upon the pus, mucus, and micro-organisms which the bladder contains. A fifteen-volume solution should be diluted one-half, and, previous to its introduction the bladder should be washed out with a warm solution made by dissolving a teaspoonful of common salt and one-half teaspoonful of bicarbonate of soda in one quart of water.

Injections of strong solution of nitrate of silver, in cases of chronic cystitis, have sometimes given very flattering results. No doubt these results are due to the antiseptic properties of the solution, since weak solutions are of little or no avail. Solutions of less than five grains per ounce have not given good results, while solutions of twenty grains per ounce are generally recommended.

In the use of peroxide of hydrogen for the purpose of thoroughly cleansing the bladder of organisms which, by their multiplicity in it, keep up cystitis, we are employing a drug that causes none of the dangers which a strong solution of nitrate of silver might produce; therefore, I do not think it necessary to recommend the use of strong solutions of nitrate of silver, or any other of the solutions of antiseptics that have been resorted to heretofore in the treatment of this disease.

To summarize, I would state the principles upon which the treatment of cystitis should be based in the following terms: (1) thorough drainage of the bladder; (2) rendering of the urine bland by food, medicine, and the liberal use of sterilized distilled water; (3) the relief of tenesmus by anodyne suppositories in the rectum or vagina; (4) the destruction of micro-organisms in the bladder by washing it out with solutions of peroxide of hydrogen; and (5) the removal of all foreign bodies from the bladder.—Dr. Hal C. Wyman in *American Therapist.*

STRYCHNINE AND DIGITALIS IN DIARRHŒA.

In the London *Practitioner* for August, 1992, Surgeon-Captain Harold Hendley writes upon this subject:

Fever of a remittent character or with a tendency to a continued type has often necessitated recourse to various drugs and expedients to meet the many complications that arise. A complication occurring frequently, and at a time when the patient, worn out by fever and with rapidly failing digestive powers, is least able to resist it, is persistent diarrhœa.

In such a case the temperature at this stage probably ranges from one to two and a half degrees above normal; the pulse is soft and yielding, not very rapid, and markedly wanting in tone. The motions, at first four or five in the day, increase in number, until each installment of nourishment appears to excite an action of the bowels, which has an even greater tendency to fluidity. The extreme is reached when the motion escapes involuntarily, but is followed by a decided tendency to cardiac failure, if not collapse, which is not unseldom accompanied by a consciousness of approaching dissolution in the patient. It was in such a case as this, occurring in an English lady in India, that the author first tried the effects of a combination of tincture of digitalis and liquor strychnine, the one on account of its well-known general action on the vaso-motor nervous system, and the other for its lesser-known, more direct action on that portion of this system concerned in the control of the blood supply to the intestines. There was the risk that the strychnine might increase peristaltic action, but, having often given it for constipation, it appeared that its marked good effect in this complaint had been due to increased muscular tone, more especially in the lower bowel. Now, however, the need seemed greater than the risk, so astringents were stopped, and a mixture was given containing tincture digitalis, four minims; liquor strychninæ, two minims; and spirits of chloroform, five minims, in water.

One hour afterwards, when the dose was repeated, a change for the better was observable. Of the two motions passed, the last had been accompanied with the very slightest tendency to faint, there was less restlessness, and the pulse had improved. The third dose was given after an interval of two hours, and half an hour afterward the patient fell into a deep sleep, which, with intervals for the taking of the mixture, now given every four hours, and for food lasted twenty-four hours. Recovery from this point was rapid, and no relapse followed.

This case occurred in 1889. Since then Hendley has used strychnine alone, or combined with tincture of digitalis or salicylate of sodium, in a very considerable number of cases in which diarrhœa has been accompanied with symptoms denoting a general want in tone, and with much success. The last very important case occurred in a native woman, who had four days previously been confined of twins. She had been attended by partly-qualified women-doctors, and everything that could be done had been done. She had lost much blood, she had fever ranging from 102° to 103° Fahrenheit, and her condition when the author saw her was much the same as that already described in the other case,—plus an ill-contracted uterus. No success had attended efforts to stop the diarrhœa by means of astringents, and when the writer saw her she appeared to be beyond hope of recovery. Astringents were at once stopped, and a mixture containing liquor strychninæ, five minims; tincture of digitalis, five minims; and liquor bismuthi and ammonii citratis, eight minims in dose, was given in peppermint-water, for the first three doses, every two, and then three, and later, four hours. Here the immediate effect was not very evident; but later on there was very marked improvement, the extreme feeling of cardiac distress during the passing of a motion soon passed off, and stools became less watery, but in the first forty-eight hours decreased frequency was not apparent. The patient made a slow but complete recovery.

Mr. Hendley is not inclined to consider strychnine and digitalis of value in diarrhœa other than such as described. There can, however, be no doubt but that astringents often do more harm than good, and that opium, especially in cases of diarrhœa with hepatic congestion, tends eventually to a fatal issue.

Strychnine appears to him to have a much quicker action on both the muscular system and the blood-supply of the intestines than it is generally credited with, though it is doubtful if in medicinal doses it has an effect in creating or increasing peristaltic action.

Regarding the use of digitalis with strychnine, he has long looked upon the two drugs as very efficient companions in other morbid affections under allied conditions, and there is little doubt but that the combination is one of much value, and capable of yielding marked and very satisfactory results.—*Therapeutic Gazette.*

THERAPEUTIC EFFECT OF TESTICLE JUICE.

BROWN-SEQUARD (*Soc. de Biol.*, October 29) sums up the experience so far accumulated as to the therapeutic effects of testicle juice as follows: In more than one hundred thousand injections the procedure has only on two occasions been followed by rise of temperature; hardly any pain has been complained of, and no symptoms of septic infection have been observed. In one hundred and twenty cases of ataxy in which the method has been used there have been only two instances of failure. In four cases of cancer improvement has taken place, discharge being diminished, pain ceasing, bleeding being checked, œdema disappearing, and the tumor seeming to shrink. In cases of uterine fibromata the tumor has always been reduced in size. Of seven cases of paralysis agitans two have been improved, one of them being almost cured. In all the cases of lateral sclerosis in which it has been tried, the method has given good results. In tuberculosis it has been very successful; diabetes has also been favorably influenced, and one case has been cured. The preparation, as prepared by d'Arsonval, is now of the strength of one in two and five-tenths instead of one in five, as it used to be. An equal weight of water should be added to it before use; this prevents the injections causing pain.—*British Medical Journal.*

THE APPLICATION OF ICE TO THE SPINE AS A THERAPEUTIC MEASURE.

JUST at present the employment of heat and cold in therapeutics is interesting the profession so largely that an article by Dr. Kinnear, of New York, upon the application of ice to the spine in various functional and chronic diseases is of interest.

After quoting the work of Dr. John Chapman, of Paris, upon neuralgia and kindred nervous diseases, in which Dr. Chapman urges the employment of the spinal ice-bag as an important remedial measure, Dr. Kinnear details his own experience with it. He points out that Chapman showed that by this means it was possible to overcome the coldness of the extremities frequently seen in nervous or hysterical persons, and that frequently hyperæsthesia of various portions of the body could be overcome in this way. As a rule, the application was found to be soothing and to exercise a pleasant effect upon the patient, although most of them before it was applied were firmly convinced that the results of the application would be unfortunate. Dr. Kinnear states that a patient of his reported to him that since using the ice-bag her legs and feet had become warmer, that her head was much clearer, that her temper was less irritable, and that the application "quiets and soothes the constant restlessness to which I am generally subject."

In addition to this, it revealed reflex excitability, so that she was startled by loud noises. These results were obtained after a treatment lasting about three weeks.

Dr. Kinnear also states that in cases of eczema and pruritus, the ice-bag will sometimes give relief when all others fail, and that it will also relieve mental worry. The ice-bag should be applied to such portions of the spine as seem tender upon pressure.—*Therapeutic Gazette.*

INJECTIONS OF EXTRACT OF SHEEP'S THYROID IN MYXŒDEMA.

A. Napier (*Glasgow Medical Journal*, September) reports the following case: A woman, aged fifty-four, suffering from myxœdema, was treated with subcutaneous injections of extract of sheep's thyroid. Treatment was begun on May 12, when one gramme of a watery extract of fresh thyroid was injected into the subcutaneous tissues between the shoulder blades with a carefully disinfected Koch's syringe. The treatment was continued till June 25, when the patient was discharged much improved, sixteen injections in all having been given. A variable degree of rise of temperature was noticed after each injection, and a small abscess formed near the site of injection. As early as May 16 the patient herself noticed that her skin was looser and softer than it had been, and the author states that there can be no reasonable doubt that most marked and manifest improvement followed immediately on the adoption of treatment.—*British Medical Journal.*

BACTERIOLOGY.

THE DISINFECTION OF THE INTESTINAL TRACT.

(Ueber Disinfection des Darmkanales. From the *Med. Klin.*, at Breslau; *Zeit. f. Hygiene*, Bond XIII, page 88.) By Stern.

The indications of the therapeutics of infectious intestinal diseases present themselves under the following heads:

(1) One endeavors by mechanical means to rid the intestines of its bacterial contents either by purgatives or enemata.

(2) One endeavors to destroy the vitality of the bacteria in either by means of disinfecting agents.

(3) One endeavors either to neutralize the poisonous products of bacterial growth in the intestines before they are absorbed, or to favor their elimination after absorption has taken place. In the experiments of Stern especial attention was given to the study of those agents more especially employed for the disinfection of the intestines. These he divided into three groups:

The easily soluble, those that are dissolved with difficulty, and those that are broken up in the intestinal tract, and the actual disinfecting properties thus developed.

In the first group belong inorganic and organic acids, corrosive sublimate and other metallic salts, phenol, resorcin, chloroform, water, etc.

In the second group are placed calomel, iodoform, naphthalin, α- and β-naphthol.

The third group comprises bismuth salicylate, salol, betrol, tribrom-phenol, etc.

From the disinfection experiments of these substances performed outside of the body it was impossible to draw any definite conclusion as to the probable behavior within the intestinal tract, for the antiseptic or disinfectant activity of a substance outside of the body is not always an indication of a similar property when in the body.

By careful bacteriological study of the evacuations of an individual upon whom his experiments were performed, Stern is led to conclude that, after the employment of β-naphthol for twelve days, the whole amount administered being over forty grains, there was no appreciable diminution in the number of bacteria present in the fæces.

In a second series of experiments, in which a number of individuals received with their meals suspensions of easily-recognizable, innocent, saprophytic bacteria, to some of these the disinfectant was administered immediately before the meal, while to others it was given immediately after. In none of these cases was disinfection complete, for in the intestinal evacuations of all of them the organisms that had been administered by the mouth could easily be detected.

In these experiments the disinfectants that were employed were calomel, salol, naphthalin, β-naphthol, and camphor.

The persons upon whom the experiments were performed were in some instances those in the possession of normal health, while the balance were suffering from intestinal catarrh, intestinal tuberculosis, or typhoid fever.—*International Medical Magazine.*

MEDICAL MELANGE.

For Chronic Suppuration of the middle ear bichloride of mercury, one to eight thousand, solution is a very efficient antiseptic, used once daily.

For Cold in the Head while in the acute congestive stage there is no better remedy than gelsemium. One good large dose, about ten minims of the fluid extract, taken upon going to bed, will effectually dispose of this troublesome and uncomfortable affection. One dose is usually sufficient.

Matico in Epistaxis.—Dr. T. K. Hamilton, in a paper read before the South American branch of the British medical association, calls attention to matico as the most efficient drug for controlling nose-bleed. He has found that the powdered leaves used alone or combined with powdered starch are most valuable in controlling persistent oozing, where other remedies had failed to control the bleeding.

Cineraria Maritima in Cataract.—Dr. R. P. Banerjee, of Calcutta, reports several cases of cataract cured by the use of the juice of cineraria maritima, which strengthens the testimony of previously reported cures with this remedy. In all cases in which the doctor used the remedy the opacity cleared away in a very short time. Two drops of the juice should be dropped into the pupil three times daily, continuing the treatment for several months. The application causes no inflammation, and only a temporary burning sensation, which is but of short duration.

The Treatment of Diarrhœa by Subgallate of Bismuth.—Investigations by Colasanti have determined that subgallate of bismuth is a valuable agent in the treatment of diarrhœas of different origin, especially that due to tuberculosis. It can be suspended in mucilage or given in capsules, alone, or combined with opium, if pains are present, in doses of from two to seven grains. The author has observed no bad results following its administration.

Benzine in Pediculosis.—According to the *British Medical Journal*, Nedzwiecki strongly recommends ordinary benzine as the most effective, cleanly and convenient application for destroying pediculi capitis or pubis. The affected parts should be freely bathed with the fluid for three or four minutes. Both pediculi and nits are killed almost instantaneously. As a rule, a single application is sufficient, even in severe cases. The smell of benzine disappears very quickly. The remedy can be safely applied even in the presence of an eczematous rash, since it causes only trifling pain, which soon passes off. The only objection which can be raised against its application is, it is extremely flammable, which can be overcome by applying only during the daytime.

Vis Medicatrix Naturæ.—The *Hospital Gazette* has picked up the following legend somewhere, and publishes it without comment: "It is stated that a miser, named Elwes, when both his feet were equally injured by an accident, consulted a surgeon, who began to expiate on the severe character of the wound and on the good fortune of his having been sent for. On this Mr. Elwes said: 'Now, Mr. Sawbones, I have one thing to say to you. I do not consider myself much hurt, whereas you think I am, so I will make this agreement; I will take one leg and you shall have the other; you shall do what you please with yours, and I will do nothing to mine, and I will wager you the amount of your bill that my leg gets well first.' Elwes delighted in telling this story, and used to assert with triumphant glee that he 'beat the apothecary by a fortnight.'"

The Quack Question in Mansfield, Ohio.—At a meeting of the council of the city of Mansfield, Ohio, held on November 29, an ordinance was passed by a two-thirds majority which is intended to prevent any quacks, itinerant vendors of medicine, "tooth-pullers," or other impostors practicing their nefarious schemes in that city without first getting a permit from the health officer, who, by the ordinance, is required to be a regular physician. The ordinance also requires these persons to display a diploma from some respectable college before the health officer can give them the necessary certificate entitling them to a license at all. On the presentation of said certificate to the mayor they can receive a license for which they must pay not less than twenty-five dollars nor more than fifty dollars a day, and are also subject to a fine of not less than twenty-five dollars nor more than fifty dollars for each and every offense against the ordinance. The law goes into effect immediately after its publication, and applies to physicians, midwives, pharmacists, and dentists. If all the city councils throughout the state of Ohio would follow the example set by the council of Mansfield, they would take a grand step in the direction of getting rid of quacks and impostors, which infect all the large cities of the state. This plan has been tried in Kentucky and, so far, has proved to be of great advantage in getting rid of these leeches. It should be followed in all the states that have no special laws or cannot get special legislation to remedy this great evil.

Immunity Against Typhoid.—Bruschettini, in his experiments to obtain cultures affording immunity against typhoid, tried the effect of cultures in rabbits' blood, and found that the liquid portions, when injected under the skin, did not cause death, but a prolonged rise of temperature and progressive wasting. Injections into the peritoneum caused death in from three to five days, preceded by a rise of temperature and wasting. Injections in the blood of three to five cubic centimetres of similar cultures also caused death with the same symptoms in rabbits after about four days. He found it possible to obtain immunity to the disease with the aid of these cultures, heated for an hour at 60° centimetres, and also with old gelatin and broth cultures; that to obtain such a result it is necessary to employ about twenty cubic centimetres of heated blood culture, or fifty cubic centimetres of old broth or gelatin culture, given subcutaneously; that the serum of such immunized animals has great bactericidal powers in relation to the typhoid bacillus, much greater than that of the normal rabbit; finaly, the serum of such immunized rabbits possesses marked antitoxic actions against the typhoid bacillus.—*Times and Register.*

Wrinkles as Indicators of Age.—In a certain town in the South, where "Judges" form a large part of the population, there was an elderly gentleman, familiarly known as "Judge" ——, who, for reasons best known to himself, was quite averse to telling his age. His friends and acquaintances tried many devices in the effort to ascertain how old the "Judge" was, but to no purpose. Finally his physician, who was occasionally called upon to treat the "Judge" for hæmorrhoids, from which he was a great sufferer, thought of a plan by which the desired information could be obtained, and on the occasion of his next visit proceeded to put it into effect. Placing his patient in the proper position for an examination, he said: "'Judge,' I have recently learned of two methods for the effectual relief of piles; but both are dependent for their results upon the age of the patient, one being adapted to persons in youth, the other to those who have passed middle life. Now, in order to apply the proper treatment in your case, it is essential that I know how old you are." The "Judge," directing a knowing look into the eyes of his questioner, replied: "Count the wrinkles, doctor; count the wrinkles."—*New York Medical Journal.*

Cocillana: an Interesting Addition to the Materia Medica.—Respiratory inflammations always form a large proportion of the physician's cases. A Bolivian remedy which gives promise of much therapeutic efficacy is cocillana, which was introduced a few years ago through the researches of Professor H. H. Rusby, the eminent botanist. Experiments were made with it by many medical investigators, who found its action very satisfactory in catarrhal inflammations of the respiratory organs, in coryza, hay asthma, bronchitis, acute and chronic, influenza, and pneumonia. It possesses also laxative and purgative qualities, and has been employed successfully as a substitute for ipecac and apomorphia in catarrhal conditions. Parke, Davis & Company, who introduced the remedy to physicians, will supply reprints of articles affording information concerning its therapeutic application, and invite the medical profession to test its virtues further by clinical experiment. They have after much difficulty obtained an ample supply of it, and will be glad to afford any facts desired concerning this or any other of their new remedies for respiratory affections.

Menthol in Phthisis.—In the *British Medical Journal* for July the method of using menthol in phthisis as described by Brookhouse before the British medical association, is given as follows: Once or twice daily he injects into the trachea one drachm of a twelve per cent. solution of menthol in olive oil. This is effected by the aid of a laryngoscope and syringe especially made with a curved tube; the tube is passed through the rima glottidis, about half an inch down the trachea. After a little practice the patient becomes accustomed to its application and feels no discomfort whatever; on the contrary, there arises an agreeable sensation of warmth in the chest. One very early result is the marked diminution of cough and expectoration; the night-sweats, if previously existant, cease; the hectic temperatures become less marked; the curves often go to normal, and the patients often gain in weight.

Birds as Surgeons.—Some interesting observations relating to the surgical treatment of wounds by birds were recently brought by M. Fatio before the physical society of Geneva. He quotes the case of a snipe, which he has often observed engaged in repairing damages. With its beak and feathers, it makes a very creditable dressing, applying plasters to the bleeding wounds, and even securing a broken limb by means of a stout ligature. On one occasion he killed a snipe which had on the chest a large dressing composed of down taken from other parts of the body and securely fixed to the wound by the coagulated blood. Twice he had brought home snipe with interwoven feathers strapped on to the site of fracture of one or other limb. The most interesting example was that of a snipe both of whose legs he had unfortunately broken by a misdirected shot. He recovered the animal only on the day following, and he then found that the poor bird had contrived to apply dressing and a sort of splint to both limbs. In carrying out this operation, some feathers had become entangled around the beak; and, not being able to use its claws to get rid of them, it was almost dead from hunger when discovered. In a case recorded by M. Magnin, a snipe, which was observed to fly away with a broken leg, was subsequently found to have forced the fragments into a parallel position, the upper fragments reaching to the knee, and secured them there by means of a strong band of feathers and moss intermingled. The observers were particularly struck by the application of a ligature of a kind of flat leaf grass wound round the limb in a spiral form and fixed by means of a sort of glue.—*Medical Record.*

At the recent meeting of the American public health association, held in the city of Mexico, R. C. Kedzie, M. D., professor of chemistry in the Michigan state agricultural college, at Lansing, read an interesting paper entitled "The Ground of Safety," from which the following extract is taken: "Everything breathes, animate and inanimate, and as this function is maintained and left free, you have health, or conversely, sickness and death, because in man continuance in life or health is conditioned upon and limited by physical surroundings. Your clothing breathes, otherwise you could not tolerate it an hour; plastered walls breathe and yet without unhealthly air currents. I am often asked what is the influence of wall-paper on the unhealthfulness of a room? Let us test this question by seeing whether air will readily pass through wall-paper. I place a piece of wall-paper over the bowl of this pipe and try to blow the air through it, you see the flame (burning candle) is only feebly swayed, but if I use this filtered paper in the same way, I readily blow out the flame. The sizing used to lay on the colors of wall-paper fills the pores of the paper so as to nearly prevent the passage of air, even when we blow forcibly; but with the additional paste used to fasten the paper on the wall the papered wall becomes impervious to air. Over the plastered mouth of this pipe I have pasted some thin wall-paper; it is now dry, but you see I cannot blow the least air through it. *A papered wall is a strangulated wall so far as respiration is concerned.* When a wall is calcimined, the wall becomes impermeable to air. Here is a pipe the mouth of the bowl filled with mortar and this covered with calcimine; it has been thoroughly dried, but only a minute trace of air can be forced through it. The same is true of a painted wall. Here is another pipe filled with mortar. I have very thoroughly whitewashed the exposed face of the mortar, applying two coats of whitewash; yet you see I can blow air through it nearly as easily as through rough plaster, thus demonstrating how admirably a plastered wall when dry is fitted to make the wall of a healthy dwelling."

SHALL SUCCESS IN THERAPEUTICS BE IMPERILED BY ETHICAL CONSIDERATIONS? —William H. Hawkes, M. D., writing on this subject in the *New York Medical Journal*, says: I have read and weighed the contents of the letter in your issue of December 19, 1891, on this subject: "Shall Success in Therapeutics be Imperiled by Ethical Considerations?" That certain points in this letter have made a profound impression upon me is the main reason why I now address you, and respectfully ask that my letter be published in the columns of the *Journal* in vindication of the honorable standing to which all good and true practitioners of medicine aspire. Dr. Dodge states very clearly a point that is now appealing to every progressive physician—that in these days of advancement in the manufacture of pharmaceutical products we should no longer be confined, as were our forefathers, to prescribing drugs in their crude form, since there are to-day thoroughly attested remedies in palatable form which our patients can take without repugnance and with benefit. Now, while the code of ethics is an admirable exponent of the tenets which are acceptable to the great body of practitioners in our country, yet it is at least a question open to discussion whether there are not some points which in our progressive age might be reconsidered and revised. And I would suggest as one subject for discussion the question of the approbation and recommendation of certain proprietary articles which are in almost daily use by very many of our ablest practitioners. Why should those preparations be condemned simply because their manufacturers are protected under a registered trade mark? Is it not perfectly legitimate for our medical societies to elect competent committees to be judges of the therapeutical value of tried proprietary preparations? And could not their recommendation also be secured by their indorsement: (1) In didactic and clinical lectures and private instruction given to medical students? (2) In original articles acceptable to the editors of recognized medical journals; and (3) In standard medical works? I address you particularly on this subject for the reason that the readers of your journal have carefully observed the fearless manner in which you and your able associates have defended the worthy against the unworthy and given justice where justice was due. We have also seen that your journal has reviewed and commended works by others than medical writers. I have in mind the fact that the very excellent work on the therapeutical application of coca erythroxylon by Angelo Mariani, of Paris, France, the proprietor of the world-renowned Vin Mariani, was favorably reviewed in your journal.

ANTISEPTIC TREATMENT OF PERNICIOUS ANÆMIA.—Dr. G. A. Gibson (Edinburgh), acting on the suggestion of Dr. W. Hunter, that the destruction of the blood in this disease may be due to the presence of toxic bodies originating in the alimentary canal, treated a case of pernicious anæmia with β-naphthol. The patient, a man, aged fifty-five years, presented all the classical features of the disease with the exception of dark urine and retinal hæmorrhages. On admission there were eight hundred thousand red corpuscles per cubic millimetre, with obvious changes in shape and size. Arsenic was tried first, but rapidly abandoned on account of gastric symptoms. Protochloride and perchloride of iron were next tried, but the patient continued to lose ground so much that transfusion (six ounces of defibrinated venous blood) was performed. Two days later the red corpuscles were one million, one hundred and twenty thousand; but by the end of a week they had fallen again to nine hundred and twenty thousand, and the patient's strength was rapidly failing. β-naphthol was now given thrice daily in two-grain pills and continued for three weeks. There was considerable intestinal disturbance during this period, and during the first week of treatment the red corpuscles fell from one million to eight hundred thousand. A severe attack of diarrhœa now supervened, during which the administration of the antiseptic appears to have been withheld. It abated at the end of a fortnight, when the general condition was noted as being distinctly better, anæmia of mucous membranes less marked, and red corpuscles one million, and six hundred thousand. β-naphthol was again given twice a day, and the patient from this time continued to make satisfactory progress. The author is disposed to attribute the good result to the antiseptic. By way of control-experiments he has administered β-naphthol to several anæmic patients, and so far has observed a notable increase in the number of red corpuscles.—*Edinburgh Medical Journal.*

"ASHEVILLE, NORTH CAROLINA, AND ITS ADVANTAGES AS A CLIMATIC RESORT FOR PHYSICAL PATIENTS," is the title of an article by Professor J. W. Gleitsmann of New York, published in the December number of the *New Yorker Medicinischer Monatsschrift.* The writer, considering the essentials of climate for the cure of phthisis, shows that elevation, temperature, and humidity, are the main factors, and that an elevated resort lying between two thousand and four thousand feet above sea level, with a moderate winter and cool summer temperature, and a relatively dry atmosphere, is most desirable. Asheville, North Carolina, where he has resided for a number of years heretofore, presents such climatic conditions, being there favorable for the entire year. It has an elevation of two thousand, three hundred and fifty feet, is situated in the Alleghany mountains at their highest point between the Blue Ridge and Great Smokies. The whole plateau has excellent drainage, with no marshes or standing water, enjoying entire freedom from malaria. The city itself has been greatly improved in its local sanitary appointments; it has paved streets, good accommodations for tourists and invalids, and there is also located the Winyah sanitarium, a special institution for diseases of the lungs and throat, in charge of Dr. von Ruck, who is otherwise well known to the profession by his clinical results in phthisis and his contributions to medical literature on this subject. The climate in winter, while not warm, is not so cold as to interfere with the outdoor life of patients, and in protected places during the hours of sunshine the temperature frequently reaches 70° to 80° Fahrenheit. The average mean temperature is 49° for the winter months. In the summer the place is cool and compares favorably with any other resort in this country. The highest degree of temperature observed by the writer was 88° Fahrenheit. During the same year, 90° Fahrenheit were exceeded at forty-seven places in Canada, fifty times at Denver, Colorado, reaching there 102° Fahrenheit, and thirty-nine times at Colorado Springs, where a maximum of 101° Fahrenheit was observed. Higher temperatures were also observed at Sandy Hook, New York, etc., and at Saint Paul twenty-five times with a maximum of 99° Fahrenheit. Asheville's average mean summer temperature is, according to Dr. von Ruck, 65° Fahrenheit. The Asheville plateau, according to the meteorological data given, has an annual precipitation of about forty inches, and the relative humidity is less than at any other point east of the Rocky mountains, showing the place to have the third requisite, "a dry climate." Another feature of the Asheville climate is the presence of considerable quantities of ozone in the air; this, in view of the increasing popularity of oxygen as a remedial agent, is particularly interesting. Measurement for the last three years by Dr. von Ruck show an average ranging from fifty to seventy-five per cent. of the possible amount, whereas, only five per cent. was present in his observations made formerly in Ohio. The article concludes with a short consideration of the advantages of institution treatment as compared with sojourn at climatic resorts without the strict care and management which a good institution affords, the author holding that the latter are indispensable to the best results. He says: "It is not a single agent, not even climate, which constitutes a panacea for phthisis, but it is the careful and continued application of a variety of means adapted to the present condition of the individual patient which promises most. Patients do not, as a rule, know what will benefit or injure them. They need constant care and supervision. The diet must be adapted to their present state of digestion, many, when already on the way to improvement, suffer relapses on account of physical over-exertion. Climate alone protects not against faulty conduct and indiscretions committed, whether the result of ignorance or from want of self-control. Such a detailed oversight which must be extended into the minutest details is only possible by the physician who has the patient continuously with him, in other words, in a special institution." A year ago, the author spent several weeks in the institution of Dr. von Ruck, and shows by his description of its location, appointments, and management that it complies with every essential requirement, and quotes from the *Climalologist* for September, 1891, the clinical results obtained there. Of six hundred and five cases treated, subsequent information as to their conditions was received from four hundred and fifty-seven. Among these were cured, sixty-seven; with the disease permanently arrested and enjoying good health, seventy; materially improved, two hundred and fifty-eight, and grown worse, sixty-two. Results which, indeed, speak more strongly than any argument in favor of institution management as well as in favor of the advantages of Asheville's climate.

COMMERCIAL MEMORANDA.

William MacSweeny, M. D., of Killarney, Ireland, says he has found Peacock's bromides, in one drachm doses, of great service in conjestive and neuralgic headaches and in the headaches accompanying menstrual derangements.

The Physician and Surgeon

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MEMOIRS.

OPENING THE MASTOID FOR NON-SUPPURATIVE INFLAMMATORY DISEASE.*

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There is no operation in the domain of surgery, the necessity for which is better established than that of perforating the mastoid for imprisoned pus. Like many other of our standard operations that are practiced to-day, it was introduced to the profession under a misconception of the pathological condition requiring its performance. It was first proposed by Riolanus over two hundred years ago, as a relief for deafness and tinnitus caused by closure of the Eustachian tubes. The surgeons of the time seemingly did not take kindly to the operation for very little is written on the subject until the time of Petit in 1750, and Jasser, a Prussian military surgeon, in 1776. His first case was one that would be considered a typical one for the operation. After cutting through the soft tissue and periosteum and finding a drop of pus and a diseased condition of the surface of the bone, he established an opening by passing a probe deeply into the mastoid cells, forcing with injections pus and retained secretions through the mastoid and ear out of the auditory canal and nose. The patient, who was at the time suffering a great deal of pain, was immediately relieved and made a rapid recovery.

Petit, a bold surgeon, performed the operation in 1750 with a hammer and gouge, and recommended its performance for abscess and caries of the mastoid. For the next fifty years the operation seems to have been practically disregarded. Tröltsch made extensive study of perforating the mastoid, an account of which was published in 1861. He reports only seven cases prior to 1858. In 1861 he introduced a blunt probe through the diseased mastoid successfully. This was followed by the report of successful cases by others, prominent among whom were Drs. A. H. Buck, Schwartze, Eysell, Turnbull, Pagenstecher, A. B. Crosby, Agnew, Roosa, and others. The first operations were performed with a great deal of diffidence and uncertainty, quite in contrast with the bold but cautious operation of to-day.

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One of the best illustrations of the conservatism of that subtle and invisible power inherent in living tissue, the *vis medicatrix naturæ*, is shown in the comparative freedom of the mastoid from inflammatory disease that so commonly affects the middle ear. From a statistical table prepared by Dr. Roosa it appears that the mastoid is diseased in about sixty-seven per cent. of all aural cases. This is surprisingly low when we consider the close and intimate relations of the tympanum, antrum and pneumatic cells, for in the normal there is a direct communication between the tympanum, antrum and mastoid cells. In fact the mucous membranes of the larynx and Eustachian tubes are continuous with the same membrane of the tympanum and mastoid cells.

It should be remembered also that there is a great diversity in regard to the size and form of the mastoid, in the number of pneumatic cells, and that in the case of infants and young children the process is absent or merely rudimentary, becoming fully developed after puberty. It may be of large size with numerous or a few large pneumatic cells, or small contracted processes with no cells but consisting of dense compact bone. Some cases are found to consist of adipose, spongy osseous substance.

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Zuckerhandl, in 1879, gave the results of a careful study of the structure of two hundred and fifty temporal bones. He found that only "thirty-six and eight-tenths per cent. had the mastoid process entirely pneumatic, in forty-three and two-tenths per cent. it was partly like diploe, and partly pneumatic, and in twenty per cent. it was wholly composed of fatty diploe-like or sclerotized osseous tissue." These tables show that eighty per cent. of cases are constructed anatomically favorable for operation, and very little danger is to be apprehended in its performance. In the remaining twenty per cent. the chief danger lies in the relation of the sigmoid sinus which is pushed forward and outward and very near the external surface of the process. The antrum will also be undeveloped.

We now come to the consideration of the object of this paper,—the justifiableness of opening the mastoid for non-suppurative inflammatory disease of the process. I am aware that surgeons differ widely as to the necessity of opening the mastoid for anything short of retained pus. Each one must judge according to his own experience. I am satisfied that there is a certain percentage of cases of general inflammation of the mastoid peculiar in themselves, inasmuch as pus is not apt to be present until the inflammatory process has existed some time. These cases are very painful. They might be classed as typical cases of diffuse osteitis, many times resisting both local and constitutional treatment. These cases I regard as favorable for operation, because experience shows that the severe pain and reflex cerebral symptoms rapidly subside after perforation, which tends to relieve the intense congestion of the bone and cells.

The leading text-books of the day contain elaborate and extended descriptions of the operation as applied to suppurative diseases of the mastoid, some of them referring only incidently to perforation for relief of pain and congestion of the bone, while others make no mention of the operation. Schwartze, of Halle, in Prussia, who has had a large experience, says the bone should be perforated "when the mastoid appears healthy and there is no pus in the middle ear, but when the mastoid is the seat of long continued and unendurable pain which other means fail to relieve." Buck and Burnett also advise the operation under similar conditions. The operation should not be resorted to unless we fail to relieve the patient by other means. It offers in properly selected cases the quickest and surest relief from a painful and dangerous disease,—dangerous from the liability of the inflammation to result in pus, thrombus of the lateral sinus, meningitis, or cerebral abscess. The swelling, redness, and tenderness in non-suppurative inflammations is generally not so intense as is the case where pus has formed, although occasionally pus may be present in the cells with very little if any local symptoms present. On account of the danger of the operation it may be argued that we are not justified in opening the mastoid unless suppuration has taken place. This danger can only exist when performed by a careless operator or where the process is rudimentary, and the relations of the sigmoid sinus on the inner surface of the bone is such as to cause a liability of injury to the vessels or an injury to the brain.

On the other hand many cases have died through the temporizing treatment of the attending physician, who, waiting for the well-marked symptoms of suppuration to appear, is ultimately forced to advise perforation of the bone when too late to save the life of his patient. It may be truthfully said that there have been many more deaths from mastoid disease that might have been saved by a timely opening of the cells, than there has been by the simple opening of the bone for exploration. Is there any good reason why the mastoid process should not be subjected to an exploratory operation, especially in cases of suspected retained pus. Why not give the operation the benefit of the doubt, and save our patients from the misery of a long necrotic process, or perhaps death from pyæmia. There are many cases seemingly obscure in which the physician will necessarily be in more or less doubt as to whether there is active disease present in the mastoid. The patient complains from month to month until at last the disease suddenly lights up with a fatal result. The post-mortem discloses the real condition—suppuration and ulceration of the bone, with meningitis or cerebral abscess as active factors in the causation of death.

The following cases are illustrative of the benefits derived from the operation:

Case I.—Mrs. F., aged fifty-five years. On my first visit I found her suffering from an acute suppurative inflammation of the left middle ear, which had existed for the four weeks previous to my visit. She was a poor woman and had been under the care of the city physician during this period. I found her suffering intensely from pain in the ear and mastoid, and a discharge of thick ropy pus presented at the external meatus. There was a large opening in the drumhead. The pain was severe, causing at times active delirium. There was high fever. The tissues over the mastoid were œdematous and tender on pressure. Deep-seated pain marked on firm pressure. She was affected with nausea and vomiting, insomnia, and sharp shooting pain through the head radiating from the mastoid. Her general condition was one of exhaustion and debility.

She was placed upon treatment directed toward the relief of pain and suppuration of the ear, and in a few days the discharge ceased, but there was no abatement of the severe pain in the mastoid. This kept up, together with vertigo and vomiting, in defiance of all treatment. A Wilde's incision was now made cutting down to the bone. No pus discovered. Wound dressed antiseptically and antiphlogistic treatment continued as well as constitutional. No relief followed the incision, but instead the patient grew worse; marked delirium, vertigo, great pain in mastoid, sleeplessness, loss of appetite, at times great nervous agitation. She had two chills followed by high fever. I considered this case one calling for immediate opening of the mastoid, which was done five days after the Wilde's incision was made. The opening was made with a large sized Buck drill passing into a cell at a depth of one-fourth of an inch. No pus was found here. The opening was continued into the deeper cells without discovering pus. There was a free discharge of thickened blood and pulpy substance from the bone and cells, which was encouraged. A plug of antiseptic cotton was kept in the perforation for a few days. At no time was pus observed to pass out either from the external auditory canal or the mastoid. I was unable to account at the time for the severity of the symptoms without suppuration. This operation was followed by a prompt relief of pain, her general condition improved, and she made a good recovery.

Case II.—Mrs. R., aged forty-five years. First came under treatment in June, 1891. She gave a history of having contracted syphilis several years ago, for which she had treatment. For several months passed she has felt a disagreeable itching in the left external auditory canal. There has never been a discharge from the ear that she is aware of. She is suffering from shooting pains over the mastoid and left side of the head. The pains are intermittent in character and increasing in severity during each attack.

Anodynes were used to relieve pain. Quinine, iodide of potassium, and iron were employed constitutionally. Locally, blood-letting, intermittent dry heat, and counter-irritants to the mastoid, hot injections into meatus. No benefits were derived from this treatment. The drum membrane during this time was dull, intact, somewhat sunken in, and slightly congested, especially at its upper part, as was also the upper part of the auditory canal bordering on the membrane. Here a distinct redness could be observed. In July she suffered from a very severe attack which was followed by a total paralysis of the left facial nerve.

The pain in the mastoid increased in severity in spite of all treatment. The soft parts became swollen, tenderness on pressure, and marked pain on firm pressure over the bone. She complained of dizziness and nausea and seemed to be growing worse. There was increased redness of upper part of membrane, and that part of auditory canal under the seat of the antrum which indicated marked inflammatory changes taking place within the cells. The paralysis seemed to be due to pressure on the facial nerve at some point in its passage through the temporal bone within the aquæductus Fallopii.

After a careful consideration of the case, and at the urgent request of the patient for relief of her suffering, the mastoid was perforated in the usual manner with a Buck's drill. A careful search within the larger cells of the mastoid failed to reveal pus. The condition of the bone was more indicative of intense hyperæmia, with a peculiar dark reddish exudate within the cells. The wound was dressed antiseptically and healed without accident. The operation was followed with relief of pain in the mastoid and side of the head. She made a good recovery, the facial paralysis gradually improved until scarcely any trace of its existence could be seen a few weeks after the operation.

Case III.—A stout, healthy woman, forty-five years of age. Suffered from a slight acute suppurative inflammation of left middle ear. Patient consulted me one week after the first appearance of the attack. She was then suffering from intense pain in the ear. There was marked tenderness on pressure over the tragus, congestion of membrana tympani, elevation of temperature, anorexia and malaise.

Anodynes were used to arrest pain, leeches were applied to the tragus, hot antiseptic injections into the auditory canal, and constitutional treatment given. The patient experienced some relief, and in a day or two a slight discharge of pus made its appearance, to her great relief. This discharge lasted only two or three days, and she considered herself well.

About the end of the second week she was taken suddenly with a violent pain in the region of the mastoid process of the left side, dizziness and nausea being marked symptoms. This was followed by some swelling and tenderness of the soft parts over the bone. Slight pitting on pressure. These local symptoms were not so severe as is the case when acute periostitis is well established. No discharge could be seen from the auditory canal. The membrane was still congested, as was the mastoid wall of the auditory canal. All these symptoms pointed toward inflammation of the mastoid cells and osseous structure.

She was forced to assume the horizontal position on account of the dizziness and nausea ensuing while in the erect posture. She suffered intense pain in the mastoid process constantly, resulting in loss of sleep. The symptoms of meningeal irritation were well marked; indeed I felt quite sure that suppuration of the mastoid was probably about to be established if it had not already been so. I had employed in this case all of the usual local and constitutional remedies without benefit. The operation of opening the mastoid cells was proposed to the patient, and welcomed by her with the hope of obtaining relief from her intense suffering. The condition of the patient at the time of operation was as follows—time, ten days after the first symptoms of mastoid complication: Patient much exhausted, unable to sit up on account of dizziness and nausea, great pain in mastoid, vision good, optic disks normal, soft parts over mastoid œdematous and moderately tender on pressure, on firm pressure deep pain was felt by the patient; the posterior wall of auditory canal was swollen and tender, and there was congestion of drum-head, sub-normal temperature; no chills had been noticed. There was also occasional vomiting.

The patient having been anæsthetized, a Wilde's incision was made down through the periosteum, which appeared to be in a normal condition. No pus was found here. After carefully slitting up the periosteum and exposing the surface of the bone, no indication of disease was noticed. The mastoid was now drilled through the outer table to the cells with a Buck's drill, reaching the cell at a depth of a quarter of an inch. A quarter-inch drill was employed, using a reamer to enlarge the opening. Pus did not make its appearance when the cells were opened, contrary to expectation. Neither was pus found on examination of the deeper cells. The cells seemed to be filled with dark, thickened venous blood; they and the cut bone surfaces seemed to indicate excessive congestion. The wound was dressed antiseptically, and carefully bandaged.

On the day following the operation a marked amelioration of the condition of the patient was observed. She was affected with vomiting for about one week, which I ascribed to the anæsthetic, as the odor of chloroform was marked in the mucus vomited. The pain in and about the region of the mastoid soon disappeared, leaving but a slight tenderness on deep pressure, which remained for a long time after the patient was considered well. All vertigo, insomnia, and nervous depression disappeared in a few days, and the patient made a good recovery. Pus was not at any time discharged from the bone.

CHOREA.*

By E. C. TAYLOR, M. D., KALAMAZOO, MICHIGAN.

In the brief paper which I shall present to-day nothing will be said in reference to the usual symptoms, history or pathology of chorea, except as they bear a relation to the point I especially desire to dwell upon, namely, the reflex causes, or particularly those dependent upon anomalies of the visual apparatus, in which connection I shall briefly present a case in point.

About January 1, of the past year, B. C., aged eleven years, was brought to me from his home in the eastern part of the state. He had been afflicted with chorea for about ten months. When brought into my office he was entirely unable to support himself in a standing position or walk without aid. When left to himself he would immediately sink down on the floor in a semi-recumbent position, nearly every muscle of the body twitching. He was unable to feed himself or attend to any part of his toilet. The greatest care had to be exercised in regard to his diet, as the slightest variation from strict regimen would produce gastric disturbance which greatly aggravated the nervous condition. He suffered greatly from night terrors, and his sleep was at all times attended with constant talking and uneasiness.

His history was, briefly, very good, except that when about two years of age he had chorea for nearly a year which finally yielded to electricity—I imagine a faradic current. And except a slight tendency to this nervous disturbance he had been healthy until this attack had manifested itself, since which time he had steadily grown worse. As he had received excellent medical attention both at home and in Detroit and Cleveland, I realized that if I accomplished anything for him I must discover the cause, as he had received all the usual treatment including faradic electricity, which latter seemed to aggravate the difficulty and the patient.

I learned from the mother in the course of my talk with her that from infancy up to about three years of age he had a pronounced squint amounting almost to cross-eye. I then thought of a case I once had of chorea that I sent to Dr. Stevens, of New York, and he located the cause in an insufficiency of one of the eye muscles where he performed a partial tenotomy with good results, afterward adjusting proper glasses. I also remembered an article by him in some medical journal on "The Relationship Between Refractive Errors and Chorea," covering the same ground, and I believed that I had the key to the situation in this case, or at least the reason for its failure to yield to former treatment. For the next few days I devoted my energies to satisfying myself and used such crude tests as I knew. I gave him daily a general galvanic treatment which had a wonderfully soothing effect on the nervous disturbance and braced up the patient sufficiently so that in the course of a week or ten days I took him to Dr. LaCrone who gave him his usual thorough and scientific examination, and confirmed my opinion, fitted proper glasses, and from that time I had the easiest kind of sailing.

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I continued to give him daily the galvanic treatment of about eight cells. I also gave him a tonic pill of iron, arsenic, and strychnia, and in two months I had the satisfaction of seeing this boy transformed into an energetic, strong, and erect young man, who could eat anything and do anything that any boy could do. He went home, where I advised that he take daily horseback exercise on his pony. He was brought back here about two weeks ago and was scarcely recognizable, so thoroughly recovered was he. Dr. LaCrone slightly changed the glasses and he was sent on his way rejoicing. As to what brought about the result, I am convinced that the correction of the eye defect had more to do with it than anything else, and that without that aid I should have failed as lamentably as had my predecessors.

This case was of course an extreme one, and while I do not say that all cases of chorea are dependent upon this form of nervous disturbance, I do believe that a large proportion of the chorea cases are dependent upon or are influenced by it. Not to such an extent that they may not yield to proper medication, for a time at least, but sufficiently to retard recovery, or render them susceptible to another attack. I shall in the future regard all cases that have run a month or more, with suspicion, and shall in every case satisfy myself, believing, if any defect exist that a correction of it would be better and more skillful treatment than resorting to the usual medical course, as in a majority of cases no other treatment would be necessary.

A proportion of cases of chorea tend to recovery under almost any kind of treatment, or none at all. Such cases never reach the chronic stage and are not to be considered in this class. But another class, as we all know by experience, are very discouraging, and fail to yield to any sort of medication. It has never been claimed that chorea is a constitutional disease, or one dependent upon an organic cause. Therefore, our only judicious course must necessarily be in discovering the nervous disturbance which produces it, and in that search do not forget the eyes. To Dr. G. T. Stevens, of New York, belongs the credit of first pointing out this condition, and, as in all innovations, he met with a great deal of opposition, even by some eminent oculists, they basing their conclusions on examinations by the ophthalmoscope, which often really failed to show that an actual eye trouble did exist of a character which might produce this condition. But in the last year or so nearly all such skepticism has disappeared. Dr. Stevens in an examination of one hundred and eighteen cases of chorea found ninety-one per cent. suffering from some defect in vision, and this included all classes of cases. Dr. Ranney, the specialist in nervous diseases, claims to have discovered not a single case of chronic chorea in the past three years, in which he failed to find either a marked refractive error, or an insufficiency of some of the eye muscles. Certainly this is a matter worth investigating, in all stubborn cases at least.

THE SYMPTOMATOLOGY AND PROGRESS OF INFLAMMATIONS AS MODIFIED IN NERVOUS AND MENTAL DISEASE.*

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"Many inflammations furnish at no time of their course local symptoms: for example, many of the brain and its membranes, lungs, heart, etc.; but the symptoms are not to be distinguished from those of hyperæmia, hæmorrhage, gangrene, new formations, etc., of the same part." Wagner: "General Pathology."

"It must always be remembered, in considering the mode of production of inflammation, that *there are two factors in the process—the cause* and *the tissues* upon which it acts. As in the case of other morbid conditions, the causes of inflammation are *exciting* and *predisposing;* sometimes no predisposition is necessary, but often the exciting cause of an inflammation cannot act unless the resisting power of the tissues to the irritant in question has been lowered. This impairment of resisting power is the work of the "predisposing" causes; and it may be either inherited or acquired. It is obvious that in cases where predisposition is necessary the condition of the tissues is as essential to the production of an inflammation as is the presence of the exciting cause: the seed and the *suitable* soil must come together to produce the plant." Green: "Pathology of Inflammation."

Were I to re-write from my own experience the latter portion of the paragraph from the distinguished author last quoted, I should say: "It is obvious that in cases where predisposition is necessary, the condition of the tissues is as essential to the production of an inflammation as is the presence of the exciting cause (*and that the condition of the tissues as to nervous and vascular supply largely determines the character and progress of the inflammation*). The seed and the suitable soil must come together to produce the plant."

In studying the symptomatology of inflammation, we are taught that its essential features are heat, pain, redness, swelling and functional disturbance. That these symptoms should appear, however, certain conditions of the tissues must be present. It is obvious that there is necessary to heat and redness an abundance of blood in the part; and the symptom swelling implies the existence of overfilled vessels and consequent exudation into the tissues. That pain may be an accompaniment, it is manifestly necessary that the nervous supply to the tissues involved should not be lacking, and in direct proportion as this nervous supply is impaired there will be found to exist a relative analgesia.

That there is present, in low states of the system, a type of inflammation which differs in its essential features from the classical variety upon which the symptom-grouping, heretofore mentioned, is based, the very term asthenic implies. This variety of inflammation is found in wasting fevers, and accompanies pyæmia and degenerative disease of the internal organs. Quite similar to this is a variety of inflammation frequently seen in connection with nervous and mental disease. Here there is evidently lacking that nervous supply to the tissues which predisposes to inflammations of the asthenic type. It is the common observation of the neurologist that inflammations run an atypical course in nervous invalids

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and in the insane, that their symptomatology is obscure, and that bedside diagnosis is more difficult than among those having a good nervous and mental constitution. For this departure from the normal symptomatology, so to speak, and the not infrequent failures to accurately diagnosticate pathological conditions, two important reasons exist: (1) There is a relative anæsthesia of tissues,—their nervous supply is deficient because of the impairment of tone of the nervous centers. (2) The patient's sensations, his reflexes, and his ability to describe his symptoms, are all to a greater or less degree inhibited.

In the early days of my asylum work, cases of pneumonia were wont to occur with no little frequency, with symptoms such as these: The patient would seem somewhat ailing and would take to bed. There would be no pronounced chill, and little constitutional disturbance, perhaps a slight acceleration in breathing, but no cough, no sputum, nothing distinctly characteristic of lung involvment. The patient would remain in bed for several days, seeming very comfortable, taking food well, and suffering from only a slight grade of dyspnœa, if any at all. His symptoms were never urgent, the slight feeling of illness soon disappeared, and though perhaps showing acceleration of breathing for several weeks, the patient would, during the latter part of the attack, be able to be about. Physical examination, made within a few days following the patient's first symptoms, would reveal consolidation of a portion of all of one lung, and for weeks at a time the symptoms of lung consolidation would persist, the patient in the meantime feeling and appearing well enough to be out of bed. Attacks of this kind were particularly prone to occur in cases of pronounced dementia, where much mental hebetude existed, and where the life of the patient was inactive.

I remember once, many years ago, showing to the late Dr. Brodie, of Detroit, a case of this kind. The man had been ailing for six weeks, but was at that time up and dressed. He took his food well and seemed very comfortable. Nearly one entire side of his chest, however, was dull, and a number of weeks elapsed before the lung became perfectly clear. The Doctor expressed the greatest interest in the case.

In the experience of the Asylum during late years, where rules have necessitated patients going out of doors with greater regularity and leading a more active life, pneumonias of this kind have been of less frequent occurrence; but isolated cases are still present from time to time. What is the explanation of these atypical pneumonias? It is to my mind this: that the *nervous element* in the disease is lacking. There is more or less anæsthesia of all the tissues, and particularly the mucous tract. Pain is consequently deficient. The reflex act of coughing does not take place, owing to the fact that the accumulation of secretion excites but little irritation upon the unreceptive nerve terminations in the mucous tract. Circulation of blood in the vessels is sluggish, the vessels are dilated because of deficiency of innervation of their walls, and hepatization early occurs, without the antecedent phenomena—pain, dyspnœa, cough and febrile disturbance.

Of all diseases of the internal organs having pain as an accompaniment, we are taught that acute peritonitis is the most agonizing. The vivid descriptions of pain in this disease which our teachers impressed upon the minds of students have been amply verified in the practice of all. The sufferings of a hitherto healthy subject afflicted with this malady are distressing to witness. Certainly the nervous supply to the tissue must be feeble indeed, when it is possible for an inflammation of the peritoneum to proceed to a fatal termination, and be attended by the exudation of a large amount of pus, without the patient displaying any marked evidences of pain. To say that those who are accustomed to treating the chronic insane look in vain for the classical symptoms, such as drawing up of the thighs, pinched expression of the countenance, and extreme abdominal tenderness, is to hardly overstate the case. I remember a number of years ago having under treatment a male patient who died after a lingering illness, during which bloating of the abdomen was the most prominent symptom. During the time that he was confined to bed he was excited, voluble and cheerful. The pain was apparently insignificant in amount, and there was no marked abdominal tenderness. He scarcely ever complained; was loquacious, and very humorous and pointed in his remarks. Among other things, I remember that he accounted for the bloating of the abdomen on the supposition that he had been impregnated by one of the assistant physicians of whom he was very fond. We were much surprised to find post-mortem, in addition to extreme dilation of the intestines from gas and fæcal accumulations confined there because of malignant disease and stricture of the lower bowel, an extensive peritonitis involving the parietal and visceral layers, and attended by effusion of pus which filled the entire abdominal cavity.

In the recent biennial report, I have made mention of the case of a patient who died quite suddenly after less than forty-eight hours confinement to bed. She had recurrent mania attended by pronounced dementia. She never gave indications of suffering, was always playful and mischievous, particularly during disturbed periods, and showed neither subjectively nor objectively any symptom calling for an investigation of the condition of the internal organs. One morning her physician noticed a slight pallor of the countenance, and suggested to the attendant, who was herself an experienced observer, that the patient be placed in bed. This was done. During her confinement in bed it was discovered that one leg, from the knee down, was cold and pale as if from arterial plugging. In bed she gave no evidence of suffering, and careful physical examination was impracticable owing to stubborn opposition. She died within forty-eight hours, and the suddenness of her death led me to call in two of the members of this society—Dr. Galbraith and Dr. Chapman—who assisted at a post-mortem examination. What was our surprise to discover that there existed, not alone the arterial plugging, but an extensive peritonitis, a gangrenous process involving several coils of intestines, and an extensive pleurisy with effusion of pus. I remember the looks askance of those in the post-mortem room, and the faintly sarcastic allusions to there being enough of disease present to satisfactorily account for death. That these processes, or some of them must have been going on for a number of days previous to the time that she was placed in bed, is unquestionable. That they could have proceeded to the degree to which they did without the occurrence of pain or cough, marked abdominal swelling, or dyspnœa, emphasizes the statement already made: that in mental and nervous disease inflammations are prone to run an atypical course and present an obscure symptomatology.

What is heretofore stated in reference to acute diseases is likewise in a measure true of chronic diseases of the thoracic and abdominal organs. Take for example pulmonary tuberculosis. It is by no means an uncommon experience, among the chronic insane, to find patients suffering from advanced degenerative disease of the lungs who cough scarcely at all. The reflex, excited by the presence of purulent sputum in bronchial tubes normally inverted, is diminished, or may be absent, where mental disease and cerebral degeneration co-exist. Sputum not expectorated slowly fills the bronchial tubes and air cavities, and it is by no means unusual to discover post-mortem, lungs honeycombed with cavities and full of purulent matter which has failed of expulsion.

Many years ago a patient died at the Eastern Michigan Asylum in consequence of tubercular disease of the peritoneum and abdominal organs. He had been under treatment for many years; had always been in fair bodily health apparently, and but for the accidental discovery of a little pus upon his underclothing, which led to examination of the lower bowel, the extensive diseased condition there found would not have come to light. As it was, investigation revealed not only fistula in ano, but numerous sinuses undermining the tissues and extending into the buttocks and down the thighs. Some of the sinuses were six inches in length. All required surgical attention, and were laid freely open. During subsequent treatment he showed little constitutional disturbance, never complained when dressing was applied, and wore the same comfortable and careless expression of countenance which had been his wont during the entire period of our acquaintance with him. At the post-mortem examination an extremely interesting condition of things was discovered. What had formerly been the epiploon had become fused into a fleshy mass which extended diagonally across the abdominal cavity, and was adherent at a point near the anterior superior spine of the ilium. This condition, the result doubtless of a chronic peritonitis, had given no indication of its presence during the patient's lifetime. For years, however, he had had the habit of striking himself in the abdomen with great violence, and had given as an explanation of his conduct that there was a mouse inside his body. It seems reasonable to conclude that the origin of this delusion was the original irritation attending the peritoneal inflammation. As the disease became latent and quiescent, the conduct to which this delusion gave rise was continued through force of habit.

A woman came under observation not long ago, suffering from melancholia with frenzy. She was in a feeble condition, and from the time of her admission was constantly confined to bed. She made no complaint of pain, and gave no subjective evidence of local disease. Attention was attracted to the sexual organs, however, by a vaginal discharge having an offensive odor. Examination led to the discovery of a cancer of the cervix and upper portion of the vagina. The disease was far advanced, and must have been developing for a number of months. Its presence, however, had never been suspected previous to the patient's admission to the institution.

There was admitted two years ago a feeble old man who had been previously an inmate of the Detroit house of correction and of the Wayne county asylum. He evidently suffered some pain, but his mental condition forbade his locating it. He coughed occasionally, and his urine showed a pronounced ammoniacale odor. He lived only about a week after admission. At the post-mortem examination there was found a bedsore over the left trochanter; a small amount of pus diffused through the superficial areolar tissues and muscles; adhesions of both pleuræ; the lower lobe of the left lung hepatized; apex of the left lung emphysematous and containing a cicatrix; heart somewhat enlarged, and aortic valve calcareous; renal and deep epigastic arteries calcareous; intestines bound down by adhesions; chronic peritonitis; spleen enlarged; bladder sacculated and containing pus, its walls thickened, and its mucous membrane inflamed. The difficulties in the way of making an accurate diagnosis in such a case as this would seem insurmountable.

In acute disease of the nervous system, attended by mental disturbance as a symptom, degenerative inflammations are sometimes found, the course of which is similar to that of the acute bed-sore (pathologically, atrophy of the trophic cells in the anterior horns of the spinal cord). A number of years ago a woman patient came under observation who was suffering from melancholia. Her countenance was much confused, and she was inattentive to her bodily wants. Attention was directed to her condition by change in her figure, and it was found that she suffered from retention of urine. The bladder was much distended and, in view of this, required to be emptied cautiously, a small amount of its contents being evacuated at each catheterizing. A low grade of cystitis immediately developed. Gangrenous inflammation of the bladder walls followed, and notwithstanding general treatment and careful local treatment, which comprised washing out the bladder with antiseptic solutions, the patient succumbed. That the degenerative disease of the mucous membrane of the bladder in this instance was in all respects, etiologically speaking, similar to the decay of superficial tissues observed in the acute bed-sore, seems to my mind very probable.

As in the indigestion of which nervous invalids so much complain, the element of nerve supply is lacking, and as in the amenorrhœa so frequently observed in connection with acute mental trouble there is absent from the pelvic organs the degree of nervous tone necessary to this function, menstruation, so in inflammations the tissue innervation being deficient, the condition is apt to assume the asthenic type.

It is not contemplated in this article to speak at length of the general insensibility to pain so frequently seen in connection with mental disease, but as bearing upon the subject under discussion a brief statement may be of interest. This insensibility to pain may arise, first, from deficient tissue innervation (local anæsthesia or analgesia); second, from emotional states (excitement, anger, rage, hysteria); third, from dementia and sluggish mental operations.

(1) I have repeatedly known patients suffering from fracture to resist the application of dressings, to remove those applied, and to show a hilarious delight in interfering with the surgeon's attempts to secure immobility of the injured member. One patient suffering from a fracture of the clavicle seemed never so happy as when rubbing the broken ends of the bone together by a motion of the shoulder. This same patient, while suffering from an inflamed knee-joint to which extension had been applied, was not satisfied until by surging back and jerking upon the injured limb, he had broken the heavy adhesive straps attached to the foot-piece and found himself free to move his limb as he pleased and walk upon it if the desire siezed him. Closely allied to this must be the anæsthesia of intoxication. I was told by a physician who had personal knowledge of the facts, that in a drunken orgey a man danced until he broke both bones of

the leg by muscular action. Without knowledge of the injury which he had done, he danced until the sharp lower fragment protruded through the skin and occasioned a fall to the floor, through which the injury was revealed.

(2) As to emotional states. In hysterical females suffering from maniacal frenzy, a propensity to break glass is frequently present. I have in mind no less than four or five patients who had an uncontrollable desire in this direction. They invariably used their fists, and not content with the glass breaking, in two or three instances the patient, after the successful blow had been struck, seemed to revel in savage, wild delight in drawing her lacerated arm back and forth over the broken fragments.

(3) In dementia and mental anæsthesia the same propensity is frequently present, and indulged in consequence of some sudden impulse. The cuts from the glass apparently occasion no pain. The ligation of vessels, the suturing of divided parts are not, apparently, attended by suffering. The patient may rouse from his apathy sufficiently to display a wondering interest in the surgeon's manipulation but is taught no lesson in self-control. Though childish he does not, like the burnt child, "avoid the fire," but seeks for other opportunities to complete the demolition of an obtrusive mirror or offending window.

A CASE OF SPURIOUS PREGNANCY AND SPURIOUS LABOR.*

By JAMES M. SLIGH, M. D., Granite, Montana.

It is a fact undoubtedly within the observation of all of us, that in making a diagnosis many practitioners of medicine allow an impression, whether fixed in their minds through their own hasty observations, the statements of their patients, or the statements of other practitioners who have sent cases to them, to wholly govern them in the treatment of cases under their care, to the exclusion of facts that may present, which unmistakably tend to disprove the original diagnosis. This may sometimes be due to an inability to make a diagnosis, or lack of time and proper attention to details on the part of very busy practitioners, but more often to the well-known fact that it is very hard to displace an impression once gained, even though facts tending to disprove it are present and plainly evident, if only looked for and heeded.

In illustration of this I desire to refer to three instances. About fifteen years ago, in one of the large hospitals in the east, the house-physician had a case of confinement on hand. He was an educated man, an M. D. and A. B. who had had considerable experience in obstetrical work, and whose competency was unquestioned. His examinations in the first stage of labor had given him the impression that he had a vertex presentation, and this idea was not dislodged by his future examinations. There were no movements of the fœtus evident; he could not detect the fœtal heart sounds, and added to his diagnosis of vertex presentation was that of a dead fœtus. Just as he was withdrawing his hand after an examination, the president of the faculty entered the lying-in room and asked the house-physician what kind of a case he had. The reply was that he had a vertex presentation and the fœtus must have been dead for a long time, for at the examination just made, his finger had penetrated the fontanelle and was covered with brain substance. The president said that was unfortunate, and proceeded to an examination for himself, upon completing which, he turned to the house-physician saying, with a smile, that he found a breech presentation, and that probably the brain substance on the house-physician's finger might turn out to be meconium.

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* Read before the Lewis and Clark County Medical Society, at its regular meeting on December 15, 1892, at Helena, Montana, and published exclusively in The Physician and Surgeon.

Again, about fourteen years ago, a gentleman who had practiced medicine for upward of twenty-five years sent a case to a well-known surgeon, with the explanation that it was a case of ovarian tumor which he had had under observation for nine or ten months, and he now sent it to the surgeon for operation. The surgeon received the patient, accepted the diagnosis of his friend, confirming it by a hasty examination, and as the patient was in good condition, the operation was set for the second day following. The time for performing the operation having arrived, the required instruments, dressings, etc., were disposed in their proper places, the patient was placed on the operating table, and I gave the anæsthetic. When she became fully anæsthetized the tumor collapsed and her abdominal walls lay against her backbone. Here was a pretty case of phantom tumor, and it is hard for one who has not seen such a case to believe that a good surgeon could make such a mistake, but such learned men and accurate diagnosticians as Bright, Simpson and Boivet give testimony as to the difficulty of differential diagnosis, while Simpson says that the operation of ovariotomy has been attempted in similar instances not less than six times within his knowledge (page 464 Volume XXIII, *Journal of Obstetrics*).

Again, a physician, twice president of his state medical association, related to me a few years ago that he once confirmed the diagnosis of pregnancy in one of his patients at a supposed gestation of three months, was called to the case at full term when pains were regular and strong, only to find that the woman was not pregnant; and when he told her so, the woman was so amazed at his ignorance that she sent for another physician to confine her, only to learn a second time that she was not pregnant, but was having a spurious labor.

I do not offer the foregoing as an excuse, but simply as introductory, to an interesting case that lately came under my observation.

Mrs. B., American, primipara, thirty-one years of age, brunette, nervous temperament, and of average good health, in February, 1892, informed me that she had missed her monthly flow for the last two months, and asked if I thought she was pregnant. I replied that it would be difficult to determine positively at that time, and it would, therefore, be better to wait until such time as she could determine for herself. About the 1st of May following, an addition to her house was being built and the new portion being painted, at which time she wrote me a note saying she was now very sure that she was pregnant, and asked if the smell of fresh paint would do her any harm. On July 6, 1892, I was sent for, and on arrival at her home, a few miles distant, I found her in bed, flowing slightly, with slight intermittent pains, and somewhat nervous from fear of an impending miscarriage. She informed me that a few hours previously she had started to flow, the blood coming with a gush and in considerable quantity, and that she was about six months pregnant, she having felt motion for six weeks or more. With right hand I made a digital examination per vaginam, finding neck of womb about normal in size, but softer to the touch than in a non-pregnant uterus, and my left hand on her abdomen, which was noticeably larger than usual, felt plainly, as I supposed, motions of the fœtus. I said to her that from the condition of the neck of the womb she could not be more than four and one-half or five months pregnant, and that she must have been mistaken in her statement of having felt motion nearly two months. She reaffirming her statement in this regard, I made further examination per vaginam, finding the uterus enlarged antero-posteriorly, and attempted an examination through abdominal walls by palpation, but owing to their extreme thickness, five or six inches at least, I could determine nothing definitely, except that fœtal motions were plainly felt. I did not further examine her, as from her statements at this time, and previously, I had no doubt of her being pregnant, but had examined her to the extent related, simply to arrive at some conclusion as to how far along she was. The flowing having about ceased, I prescribed an anodyne, with rest in bed, promising to see her next day, which I did, finding that her pains and flow had ceased, and she feeling quite cheerful.

On July 9, I was again sent for and found about the same conditions as on July 6. No examination was made at this visit, but a similar prescription as on July 6, was left. On the evening of July 10, I was summoned in haste, and on my arrival found that an hour or two before, she had again commenced to flow, the blood coming with a gush and in considerable quantity, and pains occurring every three or four minutes, simulating labor pains. She informed me that motions of the child had been particularly strong that day and she was very certain that a miscarriage must take place. I was also of that opinion and having made up my mind that there was a placenta prævia, I thought it best to expedite matters, but found that I had in my obstetric bag only a light uterine dilator and could not make full dilatation and deliver at once as I wanted to, so I concluded to make a slight dilatation and tampon, trusting to the pains thus stimulated to complete the labor, which I at once proceeded to do, in addition thereto administering one drachm of fluid extract of ergot. Pains not increasing within an hour, I repeated the dose of ergot and went to bed, leaving instructions with the nurse to call me should the pains become notably stronger and more frequent, or should blood show through the vaginal tampon. I slept until morning, when I found the patient feeling well, the pains having stopped about an hour after I had retired. Upon removal of tampon the small amount of blood thereon showed that flowing must have ceased soon after its introduction. I was somewhat astonished at the unorthodox manner in which the case acted, but not enough so, as subsequent events proved, and returned to my office. When I arrived there I informed my asssistant that I had discovered a new method of preventing miscarriage, namely, to dilate the neck of the uterus and tampon the vagina. Even now I did not suspect that she was not pregnant, with placenta prævia complicating. Before leaving her, I informed her that she had a placenta prævia, and advised immediate delivery, on account of the distance she was from any physician, but she declined this, being a Catholic, preferring to take the risk to her own life rather than possibly sacrifice that of the child.

Soon after this I went East and did not see her again until November, 1892, when she informed me that about September 1, she went to a small town about five miles from her home so as to be near a physician at her confinement; that at that time (September 1) her breasts were large and milk came from the nipples; that soon after arriving at said town she had some pains and sent for a physician, who proceeded to make an examination, upon concluding which he informed her that she would be confined in ten or twelve days; at the expiration of the time he assured her she would be confined, pains came on, strong and regular, and the physician was again sent for, and after a prolonged examination, including introduction of sound into womb, he told her she was not pregnant. Soon after this she returned home, and the abdominal tumor subsided. At the present time she is fairly well, excepting an absence of menstruation probably due to her obesity, for which I am now treating her.

Here is a report of an interesting case of spurious pregnancy and spurious labor, the first I have met with in an experience of several hundreds of obstetrical cases, and I bring it to your notice, not in applause of my own acute powers of diagnosis, nor in an attempt to show that the true condition might not have been detected, had proper care been exercised on my part, but rather because of the rarity of such cases, and also as tending to prove the assertion at the beginning of this article, that "It is very hard to displace an impression once gained." It may also serve another purpose, namely, to put you on your guard against a similar mistake, and the subsequent mortification of hearing that some smart doctor, whose want of experience is equalled only by his want of knowledge, has been explaining to his friends that he, nor any other really good practitioner like himself, would ever be caught like that. Another feature of great interest in this connection is the fact that a sister of Mrs. B. who lives in Asia Minor with her husband, who is a practicing physician there, went through a spurious pregnancy and spurious labor at the same time as did Mrs. B. with symptoms almost identically the same, placenta prævia being diagnosed by her husband in June, 1892, and neither of the sisters knew of the supposed pregnancy of the other until about the 1st of July, 1892.

The literature of spurious pregnancies and labors is meagre, the books on obstetrics touching the subject quite lightly, generally disposing of it with a remark to the effect that they occur in young women who either desire or fear pregnancy and at about the time of the climacteric. Not so in the case herein recorded, however, as the patient has one young child, of which I delivered her May 20, 1891; had no desire for another so soon after the first; had no dread or fear of pregnancy, as she has a comfortable home, and is in comfortable circumstances financially, nor would her age indicate that she is near the climacteric. She is, however, of a distinctly nervous temperament, but she says that her sister, who is near the same age, as Mrs. B. is not of such temperament.

Spurious pregnancies are not a great rarity in either women or animals, but spurious labors are very rare (TIDY'S "Legal Medicine," page 74, Volume III).

Dr. Matthews Duncan, whose experience in obstetrics and gynecology is very large, said in 1874, that while he had seen numerous spurious pregnancies, he had seen but one spurious labor (Ibid).

The curious manifestations of spurious pregnancies and phantom tumors, though quite likely to entrap the careless or ignorant physician (and they have entrapped many learned and generally careful physicians), can easily be detected by one means at least, namely, an examination under chloroform narcosis; and this means should always be employed when a doubt arises as to the nature of an abdominal tumor.

A short time ago I requested Mrs. B. to give me a statement in writing of her supposed pregnancy which she kindly consented to, and I herewith append a copy of her letter, omitting her residence and name.

COPY OF MRS. B'S LETTER.

DECEMBER 5, 1882.

DR. SLIGH, Granite, Montana: The facts of my case are as follows: The last time I had my monthly period was the last of December, a year ago. I missed it three times, when I consulted you as to whether I was in the family-way. You made no examination but said I could tell myself very soon. About the last of April, or the first of May I felt motion, and wrote you asking if it was safe to stay in a room where they were painting. I felt no doubt as I was growing quite large and the motion was as distinct as with my first child. The first week in July I commenced flowing; it came in gushes, dark, almost black in color, and was quite profuse. I sent for you and by your advice went to bed and took medicine to stop the flow, with, however, no effect. You finally pronounced it placenta prævia; you then dilated the womb and gave me ergot to induce labor pains. The flowing ceased and no pains followed, so you concluded to do nothing further at that time. In a week I started flowing again, it lasting one week. I staid in bed two weeks. After getting up I did not flow again. My breasts grew and secreted milk, and before subsiding my waist measured forty-two inches, twelve inches larger that natural. You then left and I went to a town situated in the vicinity to be near a doctor. There I felt well and had no trouble except something like labor pains; the doctor thereupon made an examination and said I would be sick in ten or twelve days. At the end of that time I had severe pains. I sent for the doctor, who, upon examination, found I was not pregnant at all. The next morning I returned home, and in less than a week my waist measured thirty-four inches; the milk left the breasts, and all other signs disappeared. My sister living in Turkey, in Asia, and whose husband is a physician, had the very same experience at the very same time. MRS. B.

LECTURES.

ANÆMIA WITH ENDOCARDIAL MURMURS.

BY JOSEPH M. PATTON, M. D., CHICAGO, ILLINOIS.
PROFESSOR OF INTERNAL MEDICINE IN THE CHICAGO POLYCLINIC.

THIS young woman is nineteen years old. She came to the clinic about three months ago complaining of amenorrhœa. She was given some uterine tonic at that time, which stimulated her menstrual function, and she menstruated regularly the following month. She comes back to-day saying that she has not menstruated during the last two months. You will notice that her skin is pale and sallow; the mucous membranes are somewhat blanched; the cornea is usually clear and white. The skin does not have the greenish yellow hue of chlorosis; nor are the mucous membranes as white as they appear in that disease. The patient says that her appetite is not good; her bowels are regular; she does not suffer from headache, but occasionally has slight spells of dizziness. Her pulse is rapid, rather small and compressible. On looking at her chest the action of the heart is seen to be rapid and somewhat forcible, probably as a result of excitement. The apex-beat is in the normal situation. On listening to her heart you will observe a soft, blowing systolic murmur, heard over an area bounded by the upper border of the third rib above, the lower border of the fourth interspace below, the left edge of the sternum on the right, and a parallel line on the left about two inches from the edge of the sternum. This murmur is heard best at the base of the heart, but can be readily distinguished all over the area described. You will also hear along the course of the subclavian vessels a loud blowing systolic murmur, much harsher than the one heard over the heart. This murmur is heard only on deep inspiration, and is heard as long as the lung is held fully expanded, disappearing with the beginning of expiration. You can also hear the venous hum, the so-called *bruit de diable* of the French, over the jugular vein, although it is not very well marked in this case.

Now, these murmurs are hæmic in character, and due to the watery condition of the blood. This is a case of simple anæmia. Anæmia is often found in young girls at about the age of puberty. Among the Bohemians and Poles especially we often find well-marked cases of chlorosis at this period, and they are nearly always associated with amenorrhœa. Among the Americans we find more cases of simple anæmia, and they may be associated with amenorrhœa or menorrhagia. We find, then, in this case, sufficient reason for the amenorrhœa. These various hæmic murmurs, both endocardial and vascular, which occur in these conditions, are valuable as confirmatory evidence of an anæmic condition. We will often hear a vascular murmur when no cardiac murmur can be detected and the vascular murmurs, that is, those produced in the subclavian vessels, afford a more reliable diagnostic indication of the watery condition of the blood than does the venous hum in the jugular. These murmurs in the subclavian vessels have been supposed to be due to pleuritic adhesions, making traction on the costal pleura. I do not think that this is the real cause. They are probably due to pressure on the subclavian vessels by the expanded lung, which changes the anatomic relations of the part, making some portion of the artery narrower in calibre, because, when present in cases in which the expansion of the two apices is not equal, they will be found best marked on that side that shows best expansion, and not on that side on which we might have reason to suppose that there could be pleuritic adhesions. The cardiac murmur in this case is one of the most distinct endocardial murmurs that you may expect to hear.

The diagnosis from organic murmurs is important, because when a hæmic murmur exists in young persons that have presented evidences of rheumatism, such as those transient pains commonly called "growing pains," and often associated in early life with a rapid, forcible, and irritable heart, they may readily be mistaken as rheumatic. Intra-cardiac hæmic murmurs are always systolic and softer than cardiac murmurs of organic origin, with the exception of occasional cases of mitral regurgitant murmurs. They are heard loudest at the base of the heart, over only the cardiac area, and are not transmitted as organic murmurs may be transmitted. The hæmic murmur, for instance, is heard plainly to the left of the sternum; it is not transmitted, although it may be distinguished as far down as the point of apex-contact, but not plainly. It is not heard at all outside of the mitral area or to the right of the sternum.

Now, the treatment of this case must necessarily be directed to the improvement of the condition of the blood, the specific gravity of which is lessened and the hæmoglobin diminished; the corpuscles are smaller, and the same number of corpuscles will occupy a much smaller space than they would in healthy blood. When this condition results from want of corpuscular development, it is termed anæmatosis. When due to degeneration of the corpuscles, it is called hæmophthisis. The blood-mass may be diminished; to this the term of oligæmia is applied. The best medicines to improve the condition of the blood are the various iron tonics, and the most efficient is the fresh carbonate of iron. This is made by using equal proportions of iron sulphate and potassium carbonate with a little sugar and enough acacia to make a mass. It is preferable to the sugar-coated pill. A fifth of a grain of nux vomica may be added to this pill to improve the innervation of the vaso-motor system, which is always at fault, as the vascular tension is always low in cases of this kind. As much of this medicine should be administered as the patient can take. Four or five grains should be given after every meal; the dose may be increased if the stomach bears it well. For the gastric trouble that is often associated with this condition you may give a few grains of sodium bromide with a little pepsin, with some powdered charcoal if there is fermentation and eructation of gas. Constipation will be easily relieved by the employment of cascara sagrada two or three times a day.

We will place this young woman on this line of treatment, and as soon as her nutrition is improved we can confidently predict that her menstruation will become regular. In order to stimulate the menstrual function, it is well to administer some such remedy as she was given before, at about the time that she would expect to menstruate—any reliable preparation of viburnum.

CLINICS.

DISLOCATION OF THE BONES OF THE RIGHT FOREARM BACKWARD, THE RADIUS BEING OUTWARD AND THE ULNA BEING INWARD: AND THE HEAD OF THE RADIUS BEING DISLOCATED FROM THE BASE OF THE ULNA.

By J. S. WIGHT, M. D., Brooklyn, New York.
PROFESSOR OF OPERATIVE AND CLINICAL SURGERY AT THE LONG ISLAND COLLEGE HOSPITAL.

Miss H., thirty years of age, on the second of December, 1892, was on the platform of the elevated railroad, in a crowd, when some one stepped on her dress, and threw her down forward and partly on her right side, when the right forearm, being forcibly pronated, went under her body as she fell. I saw her soon after her arrival home, and found both bones of the forearm dislocated. I made an attempt, in the usual manner, to reduce the dislocated bones, but failed to make any impression on them. Then I sent for Dr. Cochran, who administered ether to my patient. I made another attempt to reduce the dislocated bones but did not succeed any better than I did before. The soft parts about the elbow were very much swollen. I then made further examination, and found the base of the ulna and the head of the radius dislocated, one from the other; and the radius was on the outside of the lower end of the humerus, and the ulna was on the inside of the lower end of the humerus. Thereupon, I operated in the following manner:

With the forearm somewhat flexed I made traction and adduction upon it, the arm being held firmly by an assistant, and at the same time pressing on the head of the radius in the direction toward its normal position, when the socket slipped upon the articulating surface of the external condyle; then I made adduction and traction on the forearm, using the external condyle as a fulcrum, and at the same time firmly flexing the elbow, when the base of the ulna resumed its place upon the trochlea. The deformity disappeared; the forearm could be flexed and extended; and the landmarks of the elbow could be felt in their normal relations. I put the limb on a right-angled splint made of wire-cloth. There was great swelling of the limb, and severe pain followed the reduction. I kept the splint on for about four weeks, removing it every few days, for the purpose of making passive motion, as well as inspecting the condition of the joint. The motions of the elbow are limited, there being much inflammatory enlargement around the joint. It is evident that the motions of the elbow will improve, but the forearm will never have the same freedom of use as it had before the injury.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, NOVEMBER 28, 1892.

THE PRESIDENT, FREDERICK W. MANN, M. D., IN THE CHAIR.

DISCUSSION OF PAPERS.

DR. J. J. MULHERON read a paper entitled "Aseptic Midwifery."

DR. WARMSLEY scarcely liked to open the discussion being a stranger. Was pleased to hear the views of his friend, DR. MULHERON. He had never before heard of the position for the vaginal douche as recommended by DR. MULHERON. Has had over three thousand cases of midwifery and has not had a death. Has always strongly advocated strict cleanliness.

DR. E. B. SMITH recommended putting the patient on a bed stool before emptying the bowels; the patient can then bend forward.

DR. C. G. JENNINGS: Different methods of douching were recommended. External cleanliness of patient and few examinations are very necessary. Nature made delivery aseptic, even if germs are in the vagina. Nature provides for flushing the vagina. Nature provided a douche by the great secretion of the vaginal glands and also the waters. Unless septic material is introduced in considerable quantities, nature will provide against infection. In a perfectly normal delivery it seems unnecessary to use a douche. In regard to solutions it has been thought that one to five thousand of bichloride is strong enough. Cases of mercurial poisoning have been reported where a strong solution has not been employed. Thought the doctor fortunate in having three thousand cases without a death as many of them must have occurred before the days of antiseptic surgery.

DR. PARKER: Had lately read an article containing a noticeable point. The writer had observed a large number of cases of puerperal infection which occurred without apparent cause. He discovered that all the cases had just previous to delivery suffered from an infectious disease, typhoid fever, etc.

Dr. Deuel wished to ask if **Dr. Mulheron** occupied the same posture for the patient if perineorrhaphy had been performed after delivery.

Dr. Mulheron replied that he did. **Dr. Mulheron** in closing the discussion said: That we had no right to assume that asepsis was unknown before the present time, for strict cleanliness has been practiced by some, years before the days of asepsis. He has seen no cases of puerperal infection where the vaginal douche was thoroughly and effectually employed.

H. A. Gerry, M. D., Secretary *pro tempore.*

STATED MEETING, NOVEMBER 14, 1892.

The President, FREDERICK W. MANN, M. D., in the Chair.

DISCUSSION OF PAPERS.

Dr. A. H. Steinbrecher read a paper entitled "Obstetric Auscultation and Palpation."

Dr. W. P. Manton: All of us are grateful to **Dr. Steinbrecher** for having introduced the subject, and for the able manner in which it has been handled. The tendency in modern obstetrics is to do away as far as possible with digital examination. That the bacteria of infection are more numerous at the entrance of the vagina is an undoubted fact, and it is very easy to understand how they may be introduced into the maternal passages by repeated examinations. Furthermore, there is a distinct decrease in the number of patients suffering from puerperal infection in those hospitals in which digital examinations are least frequently made. Some authorities think that the legs should be extended rather than flexed in making these external examinations. In all the German clinics it is the rule that the patient be examined externally first before resorting to digital examinations. If the head is presenting you will get a sudden falling off between the head and the body corresponding to the neck. I do not think that the various positions are easily made out by external palpation alone. In a recent laparotomy it was difficult for me to determine the exact pathological condition, whether it was a cyst or extrauterine pregnancy. When chloroform was administered a point in the abdomen was elevated as if by the small parts of a fœtus, but on opening the abdomen this was found to be occasioned by a quantity of gas imprisoned in the small intestines. The chief objects in substituting external palpation for vaginal examination are: (1) The greater comfort and less embarrassment for the patient; (2) The avoidance of infection. This latter is the more important consideration and is also the chief reason for employing Credé's method of expressing the placenta.

Dr. J. H. Carstens: I have practiced and preached this method but there are difficulties in the way. For instance, in a very fat woman, in ascites, and in cases of excessive amniotic fluid, abdominal palpation is of but little value, and in fact there are cases in which it is very difficult even by external and internal examinations combined to determine the exact position of the child. The only way to make a positive diagnosis in these cases is to make the combined examination under chloroform. There are a great many cases which demand a digital examination, and I consider it bad practice to neglect to do the same. To diagnose many cases accurately you must examine the uterus. For instance, in cases of uterine neuralgia simulating labor pains, the only way to be positive of your diagnosis is to examine the condition of the os. In short, we should not be too stiff-necked in adopting one theory or method of practice to the exclusion of all others.

Dr. W. P. Manton: It was not the object of **Dr. Steinbrecher's** paper or my discussion to do away entirely with digital examinations, but to limit their frequency as much as possible.

Dr. Sprague: I recently saw a case of a pregnant woman with uterine neuralgia simulating labor pains. Upon examining the os, I found it undilated. I administered several doses of quinine which relieved the pain. I delivered her at full term six weeks later.

Dr. Hoyt: This is an important subject, and although there are cases where it is not applicable, still, the paper brought out many important points, and I believe that the adoption in practice of the methods it advocates would save a great deal of time, embarrassment, and danger of infection.

Dr. J. B. Newman: It is an important subject in every way, but the bowels should first be cleared out, and the lungs expanded and then cleared out. I have found a case where the back was forward and the feet extended touching the chin. I was unable to diagnose the position and the child died in utero. If it were possible to diagnose such a position as that, the methods would be valuable.

Dr. A. N. Collins: It would be well to make a routine practice of examining all cases of obstetrics by external auscultation and palpation before resorting to vaginal examination, because unless a man has a good deal of practice he can tell very little about what he feels. I remember a woman in labor whose bladder was very much distended and it was difficult at first to tell whether or not she had a cystic tumor, but by careful palpation it was determined that the bladder was enormously distended and she was immediately relieved by catheterization, but in spite of all this we must admit that many things are learned by vaginal examinations which otherwise would never be brought to light.

Dr. Steinbrecher: I agree with **Dr. Carstens** that there are exceptional cases which present unsurmountable obstacles to accurate diagnosis by this method alone. But I have never seen an ordinary case that could not be diagnosed by careful examination according to these examinations. The object of my paper was, however, to advocate the proper combination of both methods.

PREVAILING DISEASES AND REPORTS OF CASES.

Dr. Hoyt: I wish to report a case of epilepsy which yielded immediately to the fluid extract of viburnum prunifolium. The patient, a child, had had four or five convulsions a day for many months. The convulsions ceased after the first dose of the medicine and have not since returned although three months have elapsed.

Dr. Tibbals: I was called in quite a hurry to see a young woman twenty-five years of age, who was said to have passed her liver. It was indeed a liver, but that of a calf, and she passed it not by rectum but by the vagina. Another piece about six or eight inches long was found snugly fitted into the vagina. This was a case of attempted deception. She wished her friends to think that she had been pregnant and had undergone an abortion.

DON. M. CAMPBELL, M. D., Secretary.

EDITORIAL ARTICLES.

LISTER ON ANTISEPSIS.

ANY utterances upon the subject of antisepsis which may emanate from so distinguished an authority as Sir Joseph Lister are entitled to the consideration of those interested in the subject with which Lister's life and thought have been associated. While in no sense modifying his belief in the intrinsic value of asepsis, advancing knowledge has enabled antiseptic procedures to be so much simplified that Lister's early methods would appear very cumbersome by the side of those he now advocates.

First, among the influences which have led to this moderation in antiseptic ritual in Lister's hands, has been the knowledge that the blood-serum is not naturally a favorable field for the growth of bacteria. Next, has been the acquisition of definite knowledge of the power possessed by the human body of defending itself against microbes introduced into it, chiefly by the process of phagocytosis; so that, if microbes be not excessive in quantity or too concentrated in form, they are disposed of by natural methods. Hence Lister concedes that if proper precautions be taken against the entrance of the grosser forms of septic mischief such as exist in impure sponges, dirty instruments, unclean hands of the operator, or dirty skin of the patient, irrigation may be dispensed with.

Further knowledge of the comparative effectiveness of certain germicides in the destruction of pathogenic organisms leads Lister to revert to carbolic acid as being on the whole, the most convenient and effectual antiseptic. The organisms which have the most resisting spores do not as a rule complicate surgical proceedings. The surgeon's enemies are almost always sporeless bacilli, and though some of these show great resistance to the action of antiseptics, such as the staphylococcus pyogenes aureus, the common cause of suppuration, it has nevertheless been shown that carbolic acid destroys these organisms more rapidly than corrosive sublimate.

The essential principle of securing completely aseptic surgical conditions remains as prominently as ever the objective aim of that department of medicine with which Lister's name has been so honorably associated.

THE SANITARY OUTLOOK.

THE measures to be taken for the prevention of an outbreak of cholera still continue to be actively discussed in the lay and medical press. Taking into consideration the near approach of the opening of the World's fair, which is undoubtedly going to attract an unprecedented influx of visitors, it cannot be conceded that undue haste is being manifested in our sanitary preparations, especially with the intelligence coming to us that a recrudescence of cholera is showing itself in Europe. The ultimate form of the quarantine bill is still a matter of doubt, as the measures now being bandied to and fro in the senate and house of representatives have apparently not assumed a final stage. Just how much executive power will be vested in the federal authorities and how much left in the discretionary exercise of the separate states is an important detail still under adjustment.

There is little doubt that an exceedingly salutary interest in sanitation has been aroused in municipal circles. It is to be hoped that the newly felt enthusiasm will not run to seed, or expend itself in useless and impracticable experimentation. When a city is found expending ten thousand dollars a year in the inspection of its milk, it cannot but be hoped that the more important supervision of its water will not be overlooked. When a city provides itself with a full corps of cholera inspectors, it is to be hoped that the far weightier matters of ambulance service for the stricken, and isolation for the infected, will not be neglected. The perpetual presence of panicky feeling is not altogether a safeguard to legislation, and our health boards will need foresight and discretion to avoid the temptation of indulging in disproportionate measures of relief, or of meddling with the accidental and transitory phases of sanitary problems to the neglect of those measures which are of permanent and essential value.

EDITORIAL BREVITIES.

THE COLONIZATION OF EPILEPTICS.

THE State of New York premeditate the formation of an epileptic colony similar to that which has been so successfully operated at Bulefeld, Westphalia. An excellent site for the proposed colony has been selected at Sonyea, Livingstone county. The separation of epileptics from insane patients cannot be too forcibly insisted upon and the colony scheme is the only one which offers an opportunity for the curative, scientific and humane treatment of these unfortunates. The means of providing suitable occupations, and the teaching and prosecution of productive industries, is contemplated in the proposed scheme.

THE POISONING RECORD IN ENGLAND AND WALES.

THE poisoning statistics of England and Wales afford interesting matter for reflection. In 1891 there were eight hundred and seventy-six deaths from poisoning. Of these five hundred and forty-four were accidental, three hundred and twenty-seven were cases of suicide, and five were cases of homicide. Nearly one-fourth of the number of deaths were caused by some form of narcotic, "opium, laudanum, morphine, chlorodyne, soothing syrup, cordial, paregoric." This clearly illustrates the wisdom of restricting the sale of these remedies by unauthorized persons.

A HOSPITAL FOR CONTAGIOUS DISEASE.

THE establishment of a hospital for the treatment and more effective isolation of cases of contagious disease is one of the urgent needs of all great cities, and the erection of such a hospital by the Detroit board of health is a project which demands the support of all interested in the hygienic welfare of Michigan. In the creation of such a hospital every endeavor should be taken to improve the sanitary administration of the city. This can only be done by excluding political and partizan intrigue from the management of the hospital. The only way of providing efficient service is by the appointment of experts and competent physicians to take charge of these important sanitary interests.

THE SURGICAL TREATMENT OF CHOLERA.

Dr. Lambotte, of Antwerp, seems to have thought that surgery might offer a cure for cholera, though the remedy he proposed was a formidable one. With a view of effecting the true seat of the disease he made an abdominal section, seized the intestine through which he made an opening large enough to admit a small india-rubber tube, and then through this flushed the intestine with a one in three-thousand sublimate solution. It is not altogether surprising to learn that the patients subjected to this treatment all died. Experiments regarding the value of such a procedure should certainly have been made in animals before subjecting human beings to such doubtful alternatives.

MEDICAL NEWS.

Small-pox has appeared in Chicago. Four cases are reported.

The brain of the late General Butler weighed sixty-two ounces.

The seventieth milestone was reached by Esmarch on January 9.

The Danish government has sanctioned the practice of cremation.

The American gynecological society will meet in Philadelphia May 15.

Lawson Tait has performed three thousand three hundred laparotomies.

The Michigan state medical society will meet in Muskegon May 11 and 12.

Atlanta, Georgia, has a polyclinic for imparting post-graduate instruction.

Mr. Lawson Tait has refused a baronetcy offered him by Mr. Gladstone's government.

Medical men have been elected to the mayoralty of eleven towns in England for the ensuing year.

Dr. Roberts Bartholow is completely restored to health, and has resumed practice in Philadelphia.

The next meeting of the British medical association will be held at Newcastle-on-Tyne, August 14, 1893.

There are one thousand and nineteen students in the medical department of the university of Dorpat, Russia.

The cooking school exhibit at the World's fair will be under the direction of Miss Juliet Corson, of New York.

The International congress of charities, correction and philanthropy, will be held in Chicago, June 12 to 18, 1893.

Dr. Samuel Logan, aged sixty-one years, and professor of anatomy in the Tulane university at New Orleans, is dead. He was a leading Louisiana surgeon.

A GIFT of one million dollars has been promised as an endowment for the medical school of the Chicago university.

THE next meeting of the medical society of the state of Pennsylvania will be held at Williamsport on May 16, 17, 18 and 19.

THE Alabama state insane asylum will be superintended by Dr. J. T. Searcy, of Tuscaloosa, who succeeds the late Dr. Peter Bryce.

THE next annual meeting of the American surgical association will be held in Buffalo, New York, May 30 and 31, and June 1, 1893.

DR. PAUL RAYMOND has been awarded a prize offered by the president of the French republic for the best essay on the abuses of alcohol.

TWENTY-THREE states, one territory, and the Cherokee and Choctaw nations are protected against quackery by medical examining boards.

DR. WILLIAM W. BROWNING, of Brooklyn, New York, has received the prize for an essay on homœopathy offered by Dr. George M. Gould.

A MIDWIFE in Prussia was recently fined two dollars and fifty cents for assuming the title gebwrtshelferin when she was only a hebamme.

FRENCH COFFEE.—This much-praised beverage is said by a Paris journal to be a mixture of horse-liver, roasted black walnut sawdust, and caramel.

PROFESSOR PEAN has resigned his chair in the Paris medical faculty, having reached the limit of age fixed for the tenure of professorships in that school.

ANOTHER new feature is proposed for the World's fair in Chicago. It will be a meeting of the International nursing congress. The proposal is of British origin.

A PROJECT having for its purpose the creation of a department of public health is receiving attention in England. It will be in charge of a responsible minister.

CHICAGO reports one thousand four hundred and seventy-nine deaths from typhoid fever during 1892, against one thousand nine hundred and eighty-seven during 1891.

A PORTABLE paper hospital is a new invention which promises to be quite serviceable. It will accommodate twenty beds, and its entire dimensions are sixteen by five metres.

THE National association of railway surgeons has a membership of one thousand two hundred and thirty-six. The next annual meeting will be held at Omaha in May.

THE Belgian government has agreed to defray half the cost of a bronze statue of the late Father Damien. The statue will be erected at Louvain, the birthplace of the deceased priest.

Two new degrees have been added to the list at the university of Durham, England. Their symbolic appellations are "B. Hy." and "D. Hy."—Bachelor and Doctor in Hygiene, respectively.

LODE estimates that the number of spermatozoa in one ejaculation is upward of two hundred and twenty-five millions, and that eight hundred and forty-eight millions are formed for one Graafian follicle.

JOHNS HOPKINS will probably have a monument to cost twenty thousand dollars. The city council of Baltimore is considering the matter of appropriating this sum for the purpose.

CHICAGO is to have another free hospital, Granville S. Ingraham's will leaving about two hundred and fifty thousand dollars for the purpose. The hospital will be entirely free to the poor of the city.

UTAH now has a board of medical examiners. At the last session of the legislature an act was passed creating a board of seven members, four of whom have been chosen from the regular profession.

ACTINOMYCOSIS.—Secretary Rusk has received a report from Dr. Salmon, chief of the bureau of animal industry, to the effect that iodide of potassium is a remarkable success as a remedy for lumpy jaw in cattle.

CINCINNATI has developed a new medical specialty, and is considering the feasibility of imparting post-graduate instruction therein. One of her physicians is secretary of three medical societies and two medical colleges.

IT is rumored that Rush medical college and the college of physicians and surgeons have offered to donate their entire property to the Chicago university, and the faculties to tender unconditional resignations. This in behalf of higher medical education.

THE Columbian university of Washington, has decided to abandon the co-educational feature. The presence of women in the medical department had the effect of keeping male students away, and the institution did not desire to be converted into a female seminary.

AN American quack, professing to be a graduate of the Cincinnati eclectic medical college, and calling himself Dr. Hale, the "Great American Physician," has been convicted and sentenced to eighteen months hard labor on a charge of obtaining money on false pretenses.

DR. MARY PUTNAM JACOBI has been elected president of the neurological section of the New York academy of medicine. The academy has been in existence for more than twenty-six years, but Mrs. Jacobi is the first female physician elected to the distinguished position of presiding officer of this important section.

DURING the year 1892 there were reported in New York city forty-four thousand three hundred and seventeen deaths; forty-nine thousand four hundred and thirty-seven births. During the year 1891 there were thirty-three thousand six hundred and fifty deaths; forty-six thousand nine hundred and four births.

VINEGAR AS AN ANTISEPTIC.—The investigations of Drs. Abbott and McCormick, of the Johns Hopkins university, show that a solution containing seven per cent. of acetic acid is more effective as a germicide than bichloride of mercury. The tendency of bichloride is to encapsule the germs which may render them innocuous at first, but render them free later.

THE SIGNS OF DEATH.—The French academie des sciences proposed, as the subject of the Dugaste prize, "The signs of death and the means of preventing premature burial." The prize was won by Dr. Maze, who considers that putrefaction is the only certain sign of death. Cremation is advocated and the establishment of mortuaries in which dead bodies can await burial.

THE Ohio state board of health has declared against indiscriminate kissing, and appealed to the pastors' union of Columbus, to inaugurate a crusade against the practice on the ground that it is a dangerous method of transmitting disease germs.

SAINT LUKE'S free hospital, located in Chicago, received one thousand five hundred and four cases for treatment during the year ending October 1, 1892. These were divided as follows: Surgical, five hundred and seventy-three; medical, four hundred and forty; gynecological, two hundred and sixty-six; ophthalmological, twenty-six; otological, five.

DR. RALPH BUTTERFIELD, of Kansas City, has bequeathed one hundred and eighty thousand dollars to his alma mater, Dartmouth college, for the purpose of founding a professorship in archæolgy and kindred subjects, and for the erection of a suitable building. The doctor did not acquire his wealth by the practice of medicine, but by the pursuit of business.

LAST year a peddler in Rochester, New York, was successfully treated for tapeworm, and the physician rendered a bill which seemed exorbitant to the patient. The worm is on exhibition in a New York museum, and it is claimed the doctor is realizing from the proceeds. The ire of the peddler has been aroused and suit to recover the exhibit is the resultant proceeding.

THE Michigan asylum for the insane, located at Kalamazoo, has one thousand and eighty patients, representing nearly as many homes. About thirty per cent. of those admitted are regarded as curable, and from sixty-five to seventy per cent. of this number are cured and discharged. Some, however, suffer a second attack. In the care of insane patients Michigan leads all other states.

THE Wayne county medical society held its annual banquet at the Griswold house in Detroit on the 2d instant. Thirty-five medical gentlemen, including a number of visitors, were present. Toasts were responded to by Drs. Stoner, Wyman, Klein, Maire, Morrison, of Ohio, and others, Dr. O. E. Armstrong, president of the society, acting as toastmaster. The affair was a genuine success.

AMONG the many measures for consideration by the legislature of Ohio, now in session, is a bill to regulate medical practice in that state. Dr. Wanzer is the author of the bill, which, by the way, requires several alterations to make it a model one. It is not thought that a medical practice act will be passed by the present legislature, as hostility to raising the standard was manifested last winter.

THE forty-first annual meeting of the Northeastern district medical society was held at Port Huron on the 2d instant. A large number of physicians were present, and much interest was manifested in the deliberations. Officers for the ensuing year were elected as follows: President, Dr. C. M. Stockwell, Port Huron; vice-president, Dr. E. D. Gardiner, Lapeer; secretary and treasurer, Dr. Albert Yates, Washington.

A BRITISH bacteriologist has discovered nineteen thousand microbes vegetating on a single bank note. A small percentage of them belonged to the species peculiar to tuberculosis, diphtheria, and scarlatina, but the great majority comprised a type which the discoverer designates the bank-note bacillus. The note of small denomination is considered a particularly fertile medium for the cultivation and migration of the bacilli.

THERE is a bill before the legislature of Illinois to abolish the state board of health. The issue has a large sentiment supporting it. While it is admitted that the board has achieved success in regulating sanitary matters, the assertion is made that it has ignominiously failed to regulate the practice of medicine to the degree of insuring the people against quackery. The patent medicine vendor thrives in Illinois, and by paying a license of one hundred dollars he may establish headquarters and receive and prescribe for patients.

A BILL to regulate the practice of medicine in Texas will be presented at the present session of the legislature of that state. It provides for a registration law under a board of medical control which is to be composed of the governor, attorney-general, state health officer, president of the board of regents of the state university, and dean of the faculty of the medical school of the university. The governor will act as presiding officer of the board, and in his absence the president of the board of regents will officiate. The secretary of state will act as its secretary. The members of the board will receive five dollars per day when in session, and traveling expenses to and from place of meeting.

THE present legislature of California will be asked to consider a bill to regulate the practice of medicine in that state. An excellent bill has been prepared. According to the *Pacific Medical Journal*, "California has for many years been the dumping ground of illegal practitioners,—men and women—who procure so-called diplomas from unrecognized institutions, flock to our shores because no other state wants them. Here, be it said to our shame, they flourish under the protection of our public press. It is a shame upon journalism that these charlatans can publish at will their obscene literature in most of our daily and weekly papers, because forsooth, such advertisements bring in filthy lucre."

AN act to amend section eleven of the medical law of New York is before the legislature of that commonwealth. As the law stands at present everyone desiring to practice medicine in the state is required to take an examination before the board of medical examiners. An exception is provided in the amendment which reads as follows: "This act shall not apply to any student who duly matriculated in some duly incorporated medical college of the state of New York, provided that such student shall file with the secretary of the board of regents of the university of the state of New York, a certificate setting forth the fact of such matriculation, verified by the applicant, and signed by the president, secretary, and dean of the faculty of the college in which he matriculated."

THE annual meeting of the Kalamazoo academy of medicine was held in the city of Kalamazoo on the 31st ultimo, and was pronounced the most successful and enjoyable assembly in the history of the organization. The reports of the secretary and treasurer bespeak a flourishing conditon of the academy, as it begins the year with a surplus of cash on hand and a membership of ninety-two. The following officers were elected for the ensuing year: President, Dr. Irwin Simpson, Kalamazoo; first vice-president, Dr. W. G. Nihart, Mendon; second vice-president, Dr. W. M. Edwards, Kalamazoo; secretary, Dr. J. W. Bosman, Kalamazoo; treasurer, Dr. O. B. Ranney, Kalamazoo; librarian, Dr. E. H. Van Deusen, Kalamazoo. Censors: Drs. J. M. Snook, Kalamazoo; J. M. Elliott, Hickory Corners; A. H. Rockwell, Kalamazoo. A banquet was enjoyed in the evening and many happy after-dinner speeches indulged. Dr. W. M. Edwards, superintendent of the Michigan asylum for the insane, extended an invitation to the academy to hold the March meeting at the asylum, where a 6 o'clock supper will be served.

RECENT PUBLICATIONS.

REVIEWS.

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* By Henry R. Swanzy, A. M., M. B. F. R. C. S. I., surgeon to the National eye and ear infirmary, Dublin. Fourth edition. With illustrations. Price, $3.00. Cloth. P. Blakiston, Son & Company, Philadelphia.

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Readers will find the book attractively written and deserving of something more than desultory perusal.

* By Landon Carter Gray, M. D., professor of nervous and mental diseases in the New York polyclinic. One hundred and sixty-eight illustrations. Cloth, $4.50; leather, $5.50. Lea Brothers & Company, Philadelphia.

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* By George H. T. Muttall, M. D., Ph. D., associate in hygiene and bacteriology, Johns Hopkins university and hospital. G. P. Putnam's Sons, New York.

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*By Guill Kleen, M. D., Ph. D., Carlsbad, Bohemia. Authorized translation from the Swedish. By Edward Mursey Hartwell, M. D., Ph. D., director of physical training in the public schools of Boston. Cloth. Price, $2.75. P. Blakiston, Son & Company, Philadelphia.

THE CHEMICAL BASIS OF THE ANIMAL BODY.*

THE appendix to Foster's well-renowned "Text-Book of Physiology" has been so much enlarged that it now forms a distinct treatise in itself. The chemical features of the various substances occurring in the body are fully considered. First, the proteids are reviewed, then the enzymes or soluble ferments. Then follows a consideration of the pigment substances found in the tissues, the excretions and secretions of the body. The book is a necessary adjunct to the manual of physiology, and will be indispensable in every physiological laboratory. The publishers have turned out a well printed, amply illustrated, and attractively bound volume.

*An appendix to Foster's "Text-Book of Physiology." Sixth edition. By A. Sheridan Lea, M. A., D. Sc., F. R. S., university lecturer in physiology in the university of Cambridge, fellow of Carus college, Cambridge. New York: Macmillan & Company, 1893. (All rights reserved). Pages two hundred and eighty-eight. Price, $1.75.

MEDICAL PROGRESS.

MEDICINE.

FUROR SEXUALIS.

NOT even the clergyman sees so plainly, so often, and so painfully, as does the physician, the results of sexual excesses and sexual depravity. No simple factor has so much to do with producing mental and physical disease, to say nothing of personal unhappiness and domestic misery. It was Matthew Arnold who said that the weakness of the English race was philistinism, of the German, social cowardice, of the French, licentiousness. Few will doubt that of these three races the French are now the weakest, the most sterile, neurotic, and degenerate. All this is suggested by the sudden furor sexualis which seems to have attacked some of the great capitals of this country.

This is shown in our literature, our theatres, and the press. A casual glance at the tempting display on an ordinary avenue book-stand would quite take the breath away, if the phenomenon had not been one of gradual development: "Lustful Love," "Cupid's Armours," "Serpent Sin," "In Love's Arms," "Stolen Sweets," "Forbidden Fruit," "Wee but Wicked," are some of the chaste and attractive titles of works whose authors are either unknown or are simply notorious. The title-pages are also illustrated with highly-colored pictures of inflammable women, in various degrees of inartistic nudity. The stuff beneath is not literature, but cheap attempts to sustain interest with stupid stories of sensual men and women. But the books sell, mostly to adolescents, and next to voluptuaries with waning sexual powers.

As for our press, the nastiness seems mainly to furnish support to weekly publications, which retail licentious stories and gossip concerning the graceless libertinism of private individuals. We are not moralists, and we do not need to go further in the description of the present appeal to sensuousness on the part of writers and dramatic artists. We only write as students of the etiology of disease, and it seems to us impossible that such systematic coaching of the passions should not produce pathological results. The young men who are continually stimulated by lewd books and plays are led to satisfy their passions excessively, illicitly, or unnaturally. The young women are not unaffected by the same influences. We do not know whether there has been in late years an excess of gonorrhœa, syphilis, and sexual neurasthenia, but statements to this effect have been made. The birth-rate of illegitimates is said to be increasing.

When a person finds fault he is expected to present a remedy. We confess, however, that we have not any. Perhaps the present excess may lead to a reaction and cure itself. With so many youths growing up, and with every year a new crop ready and eager for sexual stimulants, it looks as if the market would continue. It is customary, however, to fall back on the "increase in intelligence of the masses," and perhaps in time this panacea may be sufficient. Surely it is true enough, leaving aside morals and religion, that an honest and continent life, a pure mind in a pure body, are the best for everyone.—*Medical Record.*

FORCED ALIMENTATION IN THE TREATMENT OF TYPHOID FEVER.

Reviewing the literature of the subject, with especial reference to the recent work of Pouritz, R. Romme (*La Tribune Medicale*, July 21, 1892) favors the administration of a forced diet in the treatment of typhoid fever, but it must be of a liquid kind, since a solid one may and does tend to produce intestinal perforation. The experiments instituted by Pouritz were directed to study the amount of nitrogen ingested and that given off by the excretions, such as the urine and the fecal matters. To study the effect of the two principal dietetic treatments, Pouritz placed two patients upon a light diet, giving them, in the course of twenty-four hours, in the form of milk and bouillon, about forty grammes of albuminoid substances, ten to twenty grammes of fats, and one hundred to one hundred and fifty grammes of hydrocarbons; this diet was continued in the febrile period as well as during the stage of apyrexia. In the same manner he subjected six other patients to a forced alimentation, ordering the ingestion of one hundred and sixty grammes of albumen, sixty to ninety grammes of fats, and nearly three hundred grammes of hydrocarbons, the articles of food consisting of eggs, boiled or broiled meat, dry-meat dust, bread, etc. In all cases the medical treatment was purely hygienic,—mouth-washing with borated water, abundant cooling drinks, alcohol in the form of wine, cognac, or Stokes's potion, and two daily baths at a temperature of 37° centigrade, of a duration each of from fifteen to thirty minutes. The results of this method are given in tabular form, and from a close examination of them it is found that the percentage of assimilation is about the same in the two classes of cases,—that is, in the first category we have a percentage of from seventy-nine to eighty-two; in the second it varies from seventy-five to eighty-three. The superiority, however, of the forced alimentation is sustained, since in this case assimilation is as good as in the classical feeding, while the daily loss of nitrogen in the first instance (two or three grammes) is less. In a general way, this forced alimentation was well tolerated, and enhanced a good appetite, especially two or three days after the establishment of the regimen. The six patients all lived, and their typhoid condition was less marked than that of those subjected to the classical method. The diarrhœa diminished, and in one case there was a tendency to constipation. Nausea and vomiting were absent. The stools lacked that fetid odor peculiar to typhoid patients, and as to their consistency, this exhibited a normal condition. Diuresis was increased (two litres per day), and there was no albuminuria produced. The diminution of the fever was followed by a convalescence without complications, and there were no relapses, no slight febrile movements, no incidental diarrhœa. About the third or fourth day of apyrexia, the patients expressed a desire to get up. It is worthy of note, nevertheless, that in these patients the appetite during the period of convalescence was not so good as that exhibited by the patients subjected to light diet.

The statistics of Kissel are similarly interesting. This author treated seventy-nine cases of typhoid fever in children. These received daily seventy-nine grammes of albumin, forty grammes of fat, and one hundred and twenty grammes of hydrocarbons, in the form of milk, soup, dry-meat powder, bread, etc. As in the case of adults, the little patients stood well the relatively large quantity of food, and even exhibited a good appetite. Of these seventy-nine patients, two died, and these two had been given solid food, which caused perforation of the appendix vermiformis and the subsequent fatal peritonitis. Generally the development of the disease was mild, and, in other respects, the results confirmed those obtained by Pouritz in the treatment of the malady in adults. Further commentary is not necessary.—*Therapeutic Gazette.*

RENAL DISEASE AND INSANITY.

Dr. Bondurant, of Alabama, has attempted to throw some light on the question of Bright's disease and insanity, through statistical data supplied by the superintendents of hospitals and asylums for the insane. Recent writers on the subject, such as Christian, Bennett, and Tuttle, appear to agree that Bright's disease is very common among the insane, and is in some cases directly responsible for the perverted brain action. Writing in the *Journal of Mental and Nervous Diseases*, November, 1892, Dr. Bondurant states that, though much has been accomplished by these workers, it is still evident that the matter is not receiving at the hands of the medical corps of our institutions for the treatment of the insane that attention which its far reaching importance would seem to merit.

From his personal experience and studies of statistics on this subject the author reasons out that "any pathological process possessing the potency of renal disease in inducing tissue malnutrition would exert an equal influence in the genesis of mental aberration; but when the supreme importance of the kidney as an organ of elimination is considered, it will be readily seen that its diseased states are most especially liable to be followed by contamination of the nutritive current." It seems to him not improbable that the psychic manifestations of other maladies—fevers, tuberculosis, etc.—are due, in part at least, to retention of the products of disease and tissue waste by reason of failure on the part of the kidneys to perform their full duty.

The author admits, however, that it cannot in many instances be proven that disease of the kidney is the primary lesion in cases showing mental alienation. In some at least, the renal disease and cerebral disorder are concurrent effects of a common cause; and in the arterio-sclerotic forms disease of the cerebral arteries enters as a complicating factor. It nevertheless appears reasonable to suppose that, whenever fully established and whatever its nature, the existence of kidney disease with the consequent interference with the function of the gland, cannot but exert a modifying influence upon the mental state of the individual.

In regard to the particular form of mental disturbance most commonly found to be associated with renal mischief, figures show that it is melancholia. Furthermore, it would appear that kidney disease of rapid development may lead to some form of maniacal excitement, whereas pathological processes of slow and insidious development are apt to be accompanied by depressive neuroses. If this opinion, expressed by Dr. Batty Tuke, be accepted as even partially true, the great preponderance of chronic nephritis affords a rational explanation of the frequency of melancholia in such cases. But Dr. Bondurant adds the qualifying statement that, it is to be borne in mind that it is not in melancholia alone that renal disease is found. It is frequent in acute maniacal excitement, and well-nigh universal in puerperal, opium, and alcoholic cases, whatever form the mental symptoms assume.

On the whole there is little doubt that, if renal disease is not directly responsible for a large number of cases of mental disturbance, it is at all events sufficiently often a complicating factor to merit serious attention. For this reason the systematic examination of the urine of insane patients should never be omitted.—*Medical Record.*

SURGERY.

COMPATIBILITY OF CONSERVATIVE AND AGGRESSIVE SURGERY.

THE circumspect philosophy of former days taught us, what man has done man may do. But the developments of more recent times say, whatever is practicable may be undertaken, without regard to precedents. Conservative and aggressive processes are combined in progressive surgery.

Conservatism in the use of all the appliances of surgery is not inconsistent with the application of the most energetic means of relief in structural disorders. A misapprehension exists with many of our profession as to the true sphere of progressive surgery, and it is my purpose on this occasion to make a distinction between rashness in the employment of operative measures and boldness in the use of surgical means of relief when clearly indicated. Real advances in surgical practice have not been the result of cutting and slashing without due consideration, but have accompanied painstaking investigation of the conditions requiring the knife and caution in the performance of operations. As a preliminary to any surgical procedure of a radical nature, correct diagnosis is essential, but to accomplish a proper understanding of a deep seated disorder it is often requisite to make an exploratory operation of greater or less magnitude.

The information based upon such an exploratory measure serves as a guide to any further surgical procedure. A verification of any complication, of a serious nature, by an exploratory step, may form a contraindication for the more radical operation which has been contemplated. A great variety of means have been employed under the expectation of elucidating the doubts surrounding very obscure cases, some of which are of a precarious nature, proving far more hazardous than disease of the proposed radical measure. It is evident that exploratory procedures of this order should be ruled out of our surgical resources, and the prime consideration for our safe guidance in exploratory operations is to be sure that the existing disorders shall not be aggravated by such procedure, nor that other graver developments shall be induced as a consequence of it. It is best always in cases involving mooted points to avoid the appearance of evil. In keeping with this precaution against the abuse of exploratory measures, it is proper to exercise great discrimination in the use of antiseptics in surgery. A most salutary result may be obtained by employing very active germicides in a case of septic contamination, whereas the same application may not be suited to an operation upon tissues in their normal state. It is now recognized by bacteriologists that certain preparations tend to destroy pyogenic organisms, and when they exist the use of such antiseptic means is indicated. On the other hand, it is becoming fully understood by clinical experience that a resort to these germicidal agents, when the pyogenic organisms are not present, operates unfavorably upon the healthy structures. The reaction in the practice of many surgeons of large practical experience, from observing the absolutely hurtful effects of the ordinary solutions of corrosive sublimate, when brought in contact with the absorbent surfaces of normal structures, is tending to a limitation of this poisonous substance to external use. These do not belong to the class of "superfluous laggards" who are characterized as opposed to the methods of asepsis and antisepsis by the author of a recent work on surgery. But they are of that independent order of creation who are not bound down by any prescribed formula and are bold enough to abandon a vicious practice which has brought trouble in its train to many victims of routine treatment.

It is well known to all surgeons, who have investigated thoroughly the merits of antisepsis, that there are many germicidal applications far safer than corrosive sublimate, which meet all the requirements in surgery, and the day is not far distant when the use of the solutions of corrosive sublimate will be excluded from all operations upon incised healthy structures. There is a gradual movement of the pendulum of antisepsis toward asepsis, and it is found that sterilized water is the safest and best wash for surfaces not contaminated by previous septic development in their tissues.

Antisepsis has a legitimate field of use in surgery, and it is to be regretted that the careless extravagance of the advocate of sublimate solutions should have given this process a black-eye by poisoning patients with them who could have been treated successfully with other antiseptic agents.

Great detriment to proper antiseptic treatment has ensued from the indiscriminate application of solutions of corrosive sublimate, but judicious men are now more guarded in employing them in surgery.

Upon the general principle that no surgical operation of any magnitude should be undertaken without proper knowledge of the habits of life on the part of the patient, I may advert to a fact which has been overlooked by many operators, in regard to the importance of continuing the use of any stimulant or narcotic to which the patient has long been accustomed. Within my experience the interruption even of the tobacco habit has been followed by troublesome nervous depression after operations, and the resumption of the use of this narcotic has afforded complete and prompt relief. I recall an instance of laparotomy for the removal of an immense cystic tumor of the ovary in a lady sixty years of age, who, of her own accord, stopped smoking the pipe after the operation. For a few days all seemed to be doing well with the case, but at the end of a week there was a most profound depression of spirits with vital prostration, which immediately disappeared upon resuming her pipe and the final result was entirely satisfactory.

We all know that a patient who has been addicted to the use of alcoholic drink for a considerable period before submitting to any surgical operation, cannot have it suddenly abstracted without being subjected to great disturbance of the entire nervous system. If he does not reach the point of perturbation to produce delirium tremens, there will still be such derangement of all the functions as to interfere materially with proper nutrition, which may pave the way to serious complications in the after-treatment of the case. It is, hence, essential under such circumstances, to take into account the previous habit in this respect, and continue to give certain quantities of the alcoholic stimulant at fixed periods to avert any troublesome consequences. An individual may fail to give such information as to habits of life in regard to the use of alcoholic stimulants unless specially interrogated and yet would not hesitate to state the fact upon inquiry for the guidance of the surgeon in his case.

The most important matter, however, for our investigation is in regard to the opium habit in one subjected to a grave operation. I am convinced from a case which has recently been reported to me, that operators of experience and with a full knowledge of the use of morphine by a patient, do not always realize the great detriment resulting from the sudden withdrawal of this article after an important operation. All abnormal conditions resulting from any habit should be compensated in the after-treatment. Observation of the changes resulting from inflammatory processes, should be accompanied by a study of those modifications impressed upon the tissues by impairment or undue activity of the nerve element, which enters into their composition. That many operators fail to take into account the nervous system, in their surgical pathology, shows a lack of due consideration of the surroundings of a patient. While the legitimate field of surgery is the proper use of means of relief for organic or structural disorders, there are prerequisites in the recognition of the conditions warranting an operation and in the preparation of the patient for undergoing it safely, which should characterize the highest type of the surgeon.

The distinction of external and internal treatment is held by most European authorities as the basis of recognition for the practice of surgery and medicine. But this line of distinction does not imply that all disorders of the inner structures are to be left for the treatment of the practitioners of medicine. Nor should all the pathological conditions not demanding operations be excluded from the domain of surgery. A proper recognition of the scope of surgery and medicine is that of organic and functional disorders of the system.

With this limitation of the province of the physician as contradistinguished from that of the surgeon, the work of the former should be confined to such measures as are calculated to correct the performance of the functions of the different organs of the body, whether internal or external.

When organic changes ensue, whether demanding the use of medication or a resort to operative measures, the case comes then within the field of surgery. It presents a modification of structures, more or less pronounced, which alters the constituents so as to produce a departure from the normal state of the part involved, in its size, shape or density. An incision or a puncture may be requisite to diagnosticate such a condition, but if this change of structure could be clearly ascertained without exploratory operation, the case would still fall within the domain of surgery; with this distinction between functional and organic disorders for the practice of medicine and surgery, so soon as a change in the state of the case is recognized by the physician, it should be transferred to the charge of the surgeon, and he will still have the disadvantage of combating the latter stages of organic disorders. It may be that a skillful operator is not qualified for the highest attainment in surgery, from lack of proper precaution in proceeding with an operation.

The aim of the surgeon should be a due comprehension of abnormality in the structures of the part involved, and his end to afford relief with the least possible injury to the organ or member which is the seat of disorder. Conservative surgery may be destructive of certain parts for the purpose of saving the structures, and the properly qualified surgeon should consider maturely every phase of the case under examination, so as to assume the responsibility of lopping off the disease and prevent its extension to the sound tissues. He who fails to use the knife or the cautery, when a resort to either would stay the progress of disease, is not the exponent of conservative surgery, but, on the contrary, aids and abets the work of destruction in the parts implicated, while he contributes ultimately to the death of the patient.

Ignorance and inexperience often lead to sad results in meddlesome surgery, when limbs are sacrificed or organs mutilated, to gratify the desire to figure as a bold operator on the part of a would-be surgeon.

In such cases no high-toned member of the profession should shield the culprit from the charge of malpractice or from the assessment of damages by a court of justice. While the allegation of malpractice, without sufficient cause, should never be encouraged by the better class of practitioners, it would be well to bring home to those who rush into the surgical arena, unknowing and unknown, the consequences of their rashness. Of the two evils over-caution against doing harm is far preferable to meddlesome surgery, and yet, we would not hold him guiltless who stands with folded arms and suffers a patient to die who might be saved by a timely operation.

There is a field in surgery for masterly inactivity, and non-interference is to be highly commended when by an operation a fatal result is precipitated. The want of a proper investigation of a case presenting grave complications may lead a physician to delay in calling a surgeon until the opportunity for relief has passed and his interference can avail nothing, so that he is justified in standing aloof.

There are numerous instances of the failure in surgical procedure from the late period of performing an operation, and it is greatly to be desired that a surgeon should be called in proper time by physicians having cases under their care which are likely to require surgical interference. If a consultation should be called and the surgeon found no indications for an operation, then, of course, the physician would be relieved of any future responsibility in proceeding with the treatment. But most probably their joint attendance would lead to the most satisfactory result in enabling them to determine upon the conditions developed in the progress of the case which might warrant an operation.

The dilatory spirit manifested by patients and those around them, as to resisting surgical means of relief in acute cases, has proved a barrier to the adoption of the expressed views of surgeons in favor of prompt action in many cases of great urgency. All practitioners of considerable experience have had occasion to regret that the opportunity for forestalling a grave malady has been lost by the indisposition to submit to a timely operation, and they led a further hope to end in disaster.

In this connection, however, it may be appropriate to consider the claims of a different case to our attention; when death is inevitable without an operation, and the knife affords the only chance, however slim that may be, for escape, it is a fair mode of dealing with this class of cases, for the surgeon to put himself in the place of the patient and determine what he would desire for himself under similar circumstances. Most of us, I think, in the possession of our faculties, would avail ourselves of the operation, and hope for the best result of it. Viewing matters from this stand-point, if those interested in the patient manifest a desire to take the risk of which all are apprised, I think we are warranted in operating, even should the probabilities be greatly against a successful result.

It is very true that untoward results, even when expected, tend to discredit surgery and to give an excuse to others for declining an operation at a certain stage when it might serve a good purpose. But considering the surroundings of the individual alone, we have certain death without an operation staring us in the face; and if the patient, after being advised of the situation, desires an operation, it should be performed.

But we have a serious question for settlement among ourselves as surgeons, and I am more especially concerned in the proper adjustment on this occasion of the differences in the surgical views of those who are equally entitled to think and act in regard to surgical cases of great gravity.

At the risk of being considered heterodoxical I would draw the attention of the profession to a consideration of the propriety of immediate operation in that desperate class of cases which result from the crushing and mangling of limbs, attended with profound shock. It has been the custom of most surgeons to watch and wait, while means are resorted to for restitution of the vital forces by stimulants. With our deficient knowledge of the exact etiological factor in this anomalous condition, I am inclined to the view that a continuous baleful influence is propagated to the nerve centers from the disintegration of the structures involved, and that this may be modified favorably by a clean incision through sound tissues above the point of the injury very soon after such violence to the parts. It strikes me forcibly that surgical relief within fifteen or twenty minutes after an accident, involving the muscles, bones, nerves and blood-vessels, cannot intensify the shock, and that many of the cases left to die without any operation might be rescued by a prompt amputation of the member. The A. C. E. mixture offers the most favorable conditions for an anæsthetic and tends to lessen rather than increase the prostration, while the operation should be done with all possible dispatch.

It may prove the most conservative surgery to lop off structures whose vitality is completely destroyed and under the proposed state of the parts there can be no prospect of any restoration of nerve power or circulation to the tissues by delay in undertaking an operation. A proper appreciation of the participation in shock by the ganglionic nervous system should impress the surgeon with the great importance of arresting the morbific influence at the very earliest period practicable by removing the cause, while energetic correctives are employed.

At this point it may be appropriate to advert to the precautions requisite in all grave operative procedures to avert a depressing effect, independent of previous violence.

I have been convinced, by observation that the use of moderate doses of quinine and strychnine during twenty-four hours, preceding any important surgical operation, seems to ward off the nervous prostration. It has also been my custom to administer an alcoholic stimulant with a hypodermic of morphine and atropia within a half hour preceding such an operation, and these preliminary masures have been attended with most satisfactory results. Prevention of shock is preferable to combating it by energetic means after a surgical operation.

As a fitting conclusion of this whole matter I would suggest that no surgical measure should be resorted to without looking into and correcting all underlying departures of the physical organization from the standard of health. It may not be possible to restore the normal condition of the secretions and excretions, yet means should be used for their correction, so far as may be practicable, as a preliminary step for even the most simple operation; as the surgeon never can know in advance what complications may be developed in the course of treatment.

To prepare a patient for undergoing any capital operation, when the forces of the vital organism have been exhausted by long suffering, it is requisite to support the system by tonics and nutritious foods for days or weeks prior to the surgical procedure. A neglect of this precaution is inexcusable, except in cases of urgency, when the delay would be likely to aggravate the malady.

The after-treatment in surgical cases is in like manner of great importance to secure a good result, and this should include not only medication and food, but proper seclusion from exciting associations and due regard to the hygienic surroundings.—J. McFadden Gaston, in *International Journal of Surgery.*

THE MODERN TREATMENT OF TUBERCULOSIS OF JOINTS.

König (*Bericht über die Verhandlungen der Deutschen Gesellschaft für Chirurgie,* Number XXXII, 1892), in a general review of this subject, states that in only one-fifth of all the cases of joint tuberculosis is the local trouble the sole manifestation of disease, so that tubercular arthritis may generally be regarded as a manifestation of metastasis. In so far as the treatment of the local trouble is concerned, this consists in the direct and radical removal of tubercular foci, most thoroughly accomplished by amputation, generally accomplished, though not so certainly, by extirpation of the diseased joint, or by removal of disease foci in the bone, supplemented by vigorous curetting of the soft parts; or in combating of symptoms through intra-articular injections of iodoform; or other treatment, such as rest, extension, etc.

By means of pressure and rest almost one-half the cases are cured. The proper recognition of the value of this treatment has only been reached as the result of reaction from excessive zeal, which leads to the performance of operations so early that in many cases even a positive diagnosis could not be made.

The coxitis of children is a disease to be handled in this conservative way. The treatment is continued until the joint is painless and is functionally perfect. This often requires from six months to a year. Results are, as a rule, much better than those following resection. When the bone is involved in the process this treatment is often unavailing, and here injections of iodoform-glycerin are found to be most serviceable. The favorable results in many cases are temporary. It is safe to say that about thirty per cent. of cases are cured by injection treatment. It must be borne in mind, however, that the iodoform influences only those tissues with which it is brought in direct contact. If after four or five injections, no distinct improvement is manifested, the treatment should not be continued. Of four hundred and ten cases of tubercular disease of hip-joint observed in the last fifteen years, about one-half were treated conservatively. Two hundred and fifty were resected with about nineteen per cent. mortality, Resection was practiced in cases which resisted conservative treatment, in cases showing marked tendency to abscess formation ceseation, and in cases where the bone was extensively involved. In a few cases amputation was practiced. Where the disease is widespread, suppuration is profuse, and the liver and kidneys are diseased; it is, without doubt, the safest operation.

In ordinary cases resection with extirpation of the capsule was practiced. Of one hundred resections of the knee-joint practiced upon patients between twenty and sixty years, six died shortly after operation, six within a few weeks, sixty-four were cured, sixteen were not cured, and eight were subsequently subjected to amputation with good results. In 1888 information was obtained in regard to seventy of the patients operated on since 1876; forty-four were still healthy and were able to work; twenty had died, probably of tuberculosis; six still suffered from fistulæ.

König believes that extirpation of the capsule alone, without removal of the joint extremities, is an unsafe measure.

Bergmann, in discussing König's paper, formally commended iodoform-glycerin injections. This procedure should give place to operation only in fulminant cases. Of thirty-six cases treated by injection during 1891, thirty-one were cured, and only five were subjected to operation. Von Bergmann expressed himself as thoroughly in accord with König in condemning early resections.

Küster also expressed himself as well satisfied with iodoform injections. In the last year he performed only three resections. Even if injections are not followed by improvement, it is safe to wait, in patients under fifteen years of age. In older patients, failure of the injection method implies resection or amputation.

Koch (Dorpat) treated, in ten months of the years 1890 and 1891, three hundred and sixty-seven cases of joint tuberculosis; one hundred of these involved the hip-joint; one hundred and seventeen the knee-joint. He warmly commended the iodoform injections.—*Therapeutic Gazette.*

THERAPEUTICS.

ON CERTAIN ORGANIC EXTRACTS: THEIR PREPARATION AND PHYSIOLOGICAL AND THERAPEUTICAL EFFECTS.

Since the experiments of Brown-Séquard more than three years ago, observers in various parts of the world have been engaged in similar investigations, not only with the juice of testicles, but with extracts obtained from other glands of the body. So far, however, as I am aware, no systematic researches have been undertaken along the line of those the details of which I am about to give, and with which I have been occupied almost continuously since the summer of 1889.

In the *New York Medical Journal* for August 31, 1889, I published a report of some of the results obtained by me with the expressed juice of the testicles of the ram. The cases reported were one of traumatic neuritis, which was entirely cured by one injection, after having lasted longer than a year; two of cardiac weakness, with some of the symptoms of so-called neurasthenia, one of which has remained entirely cured without subsequent treatment, and the other (Case II), after repeated injections at different periods, is now entirely well; one of sexual impotence, in which there has been no relapse; two of muscular rheumatism and lumbago, which have remained cured; one of hemiplegia, the result of cerebral hæmorrhage, in which the patient was improved in walking, as reported, but who subsequently died from a second attack; one of melancholia, with fixed delusions, which underwent no improvement and of which I know nothing subsequently; and one patient suffering from cardiac asthma, the result of excessive mental work, and whose cure has continued to this day.

In regard to these cases I said:

"It is not necessary for me to draw any conclusions from these experiments, as they speak for themselves. It will be seen that there is evidence to show that we have in the testicular juice a valuable addition to our materia medica, the precise worth of which, however, it is not yet in our power to establish."

So far, I have nothing to retract from what was stated in the article in question; but the paragraph before the final one I am obliged, as the result of much more extensive observation, to take back, so far, at least, as it expresses a preference for the expressed and fresh juice. It is as follows:

"One point further seems to call for some consideration. I have observed that some of the experimenters sterilize the testicular juice before using it. If there is any virtue whatever in the liquid, it would be entirely destroyed by such a process. It might as well be boiled as sterilized. Experiments with such a substance are absolutely valueless. Sufficient immunity against the propagation of disease can be obtained by examining the fluid microscopically before it is injected into the system. Whatever is capable of killing the germs of disease would be equally capable of killing the vital germs upon which the testicular juice depends for whatever efficiency it may possess."

So far from these statements being correct, I am satisfied that the method I am about to describe results in the procuring of a far more powerful agent than is the fresh juice, and that the latter cannot always be used with safety, liable as it is to produce local abscesses and serious constitutional disturbance. In more than a third of the cases in which I have used it abscesses were produced, and in several painful swelling of the arm into which the injection was thrown, with fever, and in one case delirium.

Since that time I have not only continued to use the extract of the ram's testicles in those cases in which I conceived it to be indicated, but have extended my observation to a study of the influence exerted on the human body by the extract of other organs, especially that of the brain, the spinal cord, the pancreas, the thyroid gland, and the heart. For the three years past I have pursued these investigations, and if I have not rushed into print as soon as some others it is only for reasons that time has been required to prepare the extracts according to the processes I have found most advantageous, and that I did not wish to commit myself to opinions that further examination might prove to be erroneous. The time now, however, seems to have arrived at which I can lay the main points of my researches before the medical profession. I do not give them all at this time, for I have not yet reached definite conclusions in regard to all the matters embraced within the line of my investigations. I state, however, sufficient to give a clear idea of the theory upon which they have been conducted, and which, as it will presently be seen, admits of very extended amplification. I am quite sure that the system I am about to bring to the notice of the profession is not only well founded in fact, but is in accordance with physiological law, and that we have in it philosophical means of combating disease, of which I can only lay some part of the foundation, but which, through the accumulation of material by other observers, eventuate in the erection of a permanent and worthy therapeutical structure.

This system, briefly stated, is as follows:

Organic beings possess the power of assimilating from the nutritious matters they absorb the peculiar pabulum which each organ of the body demands for its development and sustenance. The brain, for instance, selects that part which it requires, the heart the material necessary for the growth and preservation, and so on with the liver, the lungs, the muscles, and the various other organs of the body. No mistake is ever committed. The brain never takes liver nutriment, nor the liver brain nutriment; but, each selects that which it requires. There are, however, diseased conditions of the various organs in which this power is lost or impaired, and, as a consequence, disturbance of function, or even death itself, is the result.

Now, if we can obtain the peculiar matter that an organ of the body requires and inject it directly into the blood, we do away with the performance of many vital processes, which are accomplished only by the expenditure of a large amount of vital force.

Let us suppose a person suffering from an exhausted brain, the result of excessive brain-work. Three hearty meals are eaten every day, but, no matter how judiciously the food may be arranged, the condition continues. Now, if we inject into that person's blood a concentrated extract of the brain of a healthy animal, we supply at once the pabulum which the organ requires. Then, if under this treatment the morbid symptoms disappear, we are justified in concluding that we have successfully aided nature in doing that, which, unassisted, she could not accomplish.

That is the system. I believe it is applicable not only to the brain, but to all the other organs of the body.

And yet I am not quite sure that it is entirely new. I recollect reading nearly forty years ago an account of some observations made by, I think, a German physician, relative to the treatment of diseases of several organs of the body by a system of diet consisting of corresponding organs of healthy animals. Thus liver disease was treated by beef's liver, heart disease by beef's heart, brain disease by beef's brain, and so on. My memory seems to be clear on the main point, but I have searched in vain for the paper to which I refer. The fact, however, that the various foods in question were cooked and were taken into the stomach constitutes a great difference with the system which I am now discussing, both physiologically and therapeutically, and the results do not admit of comparison. The germ of the idea, however, is the same, and I cheerfully yield to my unknown proto-observer whatever distinction may be claimed on the score of priority.

Besides, there have been isolated observations made within the last two or three years by German and French physicians which are to some extent in accordance with those which I have been conducting, but they do not seem to have led to any definite results or to have been systematically carried out. Generally they have been performed with the fresh juice of the organs, and although at first sight this method would appear to be preferable to any other, experience shows that it is, as I have said, not unattended with danger. Thus the organ may not be entirely fresh, morphological matter is almost certain to be injected, it is nearly impossible to filter the juice through a porous stone filter, and when passed through common filtering-paper substances injurious to its action and provocative of local abscesses and constitutional disturbance cannot be excluded. Indeed, these results have frequently followed from the experiments of others, and I have myself, as I have stated, often encountered them, notwithstanding that all possible care was taken in the preparation and administration of the agent. The method, however, which I have finally adopted never produces either morbid local or general disturbance beyond a slight smarting at the time of injection and occasionally a little subsequent itching and erythema, and it is that also from which I have derived the maxima of beneficial effects. It has been arrived at after many trials and consequent disappointments, and it is one which, with our present knowledge of the subject, I do not think can be advantageously departed from.

Taking the brain as a type of the process employed—and it is not materially varied with the other organs of the body—it is as follows:

The whole brain of the ox, after being thoroughly washed in water acidulated with boric acid, is cut into small pieces in a mincing machine. To one thousand grammes of this substance placed in a wide-mouthed, glass-stoppered bottle I add three thousand cubic centimetres of a mixture consisting of one thousand cubic centimetres each of a saturated solution of boric acid and distilled water, pure glycerin, and absolute alcohol. This is allowed to stand in a cool place for at least six months, being well shaken or stirred two or three times a day. At the end of this time it is thrown upon a porous stone filter, through which it percolates very slowly, requiring about two weeks for entirely passing through. The residue remaining upon the filter is then inclosed in several layers of aseptic gauze and subjected to very strong pressure, the exudate being allowed to fall upon the filter and mixed with a sufficient quantity of filtrate to cover it. When it has entirely filtered it is thoroughly mixed with the first filtrate, and the process is complete.

During the whole of this manipulation the most rigid antiseptic precautions are taken. The vessels and instruments required are kept in boiling water for several minutes, and are then washed with a saturated solution of borac acid. Bacteria do not form in this mixture under any circumstances, but it is necessary to examine it from time to time microscopically in order to see that no foreign bodies have accidentally entered. Occasionally, from causes which I have not determined, the liquid becomes slightly opalescent from the formation of a flocculent precipitate. This is albuminous in its character. It sometimes takes place in a portion of the extract kept under apparently identical conditions with other portions that remain perfectly clear. It is certainly not an essential constituent. It can be entirely removed by filtration through Swedish filtering paper previously rendered antiseptic without the filtrate losing any of its physiological or therapeutical power.

Five minims of this extract diluted at the time with a similar quantity of distilled water constitute a hypodermic dose.

The most notable effects on the human system of a single dose are as follows, though in very strong, robust, and large persons a somewhat larger dose is required, never, however, exceeding ten minims:

(1) The pulse is increased in the course of from five to ten minutea, or even less in some cases, by about twenty beats in a minute, and is rendered stronger and fuller. At the same time there is a feeling of distention in the head, the face slightly flushed, and occasionally there is a mild frontal, vertical, or occipital headache, or all combined, lasting, however, only a few minutes.

(2) A feeling of exhilaration is experienced which endures for several hours. During this period the mind is more than usually active and more capable of effort. This condition is so well marked that if the dose be taken at about bedtime wakefulness is the result.

(3) The quantity of urine excreted is increased when other things are equal by from eight to twelve ounces in twenty-four hours.

(4) The expulsive force of the bladder and the peristaltic action of the intestines are notably augmented—so much so that in elderly persons in whom the bladder does not readily empty itself without considerable abdominal effort, this action is no longer required, the bladder discharging itself fully and strongly, and any existing tendency to constipation diappears, and this to such an extent that fluid operations are often produced from the rapid emptying of the small intestine.

(5) A decided increase in the muscular strength and endurance is noticed at once. Thus I found in my own case that I could "put up" a dumb-bell weighing forty-five pounds fifteen times with the right arm and thirteen times with the left arm, while after a single dose of the extract I could lift the weight forty-five times with the right arm and thirty-seven times with the left arm.

(6) In some cases in elderly persons an increase in the power of vision is produced and the presbyopic condition disappears for a time.

(7) An increase in the appetite and digestive power. Thus a person suffering from anorexia and nervous dyspepsia is relieved of these symptoms, temporarily, at least, after a single dose hypodermically administered.

These effects are generally observed after one hypodermic injection, and they continue for varying periods, some of them lasting for several days. In order that they may be lasting, two doses a day should be given every day or every alternate day as may seem necessary, one in the morning and one in the afternoon, and kept up as long as the case under treatment seems to require. The most notable effects are seen in the general lessening of the phenomena accompanying advancing years. When some special disease is under treatment the indications for a cessation of the injections will be sufficiently evident either by an amelioration or cure or failure to produce these results.

To the substance obtained in the manner mentioned and held in solution I have given the name of cerebrine as the one, in view of its origin, most appropriate.

I have employed the solution of "cerebrine" with decided advantage in cases of nervous prostration—the so-called neurasthenia—in insomnia due to cerebral hyperæmia, in migraine, hysteria, general paresis, hebephrenia, and epilepsy. In these latter—two cases of the *petit mal* variety—the effect has been so marked that I am not without the hope that cures will result, although I am not able as yet to speak positively on this point, the patients having been less than a month under treatment. In two cases of the *grand mal* the number of paroxysms has been reduced more than one-half and greatly mitigated in severity. In six other cases which were of long duration I could perceive no curative effect.

In the case of general paresis no permanent therapeutical influence was apparent, though for several days the *délire de granducur* was absent. In the case of hebephrenia, however, occurring in the person of a young lady eighteen years of age, the effect has been most happy, the symptoms entirely disappearing in a little more than a month's treatment.

In two cases of nervous prostration, the result of long-continued emotional disturbance and in which there were great mental irritâbility, dyspepsia, physical weakness, loss of appetite, and constipation, relief was rapidly afforded. In three other cases, in which the most notable symptom was functional cardiac weakness, the effect has been all that could have been desired. In these cases it was employed in conjunction with "cardine," the extract of the heart of the ox made in the manner already described.

It is not my intention at the present time to enter into a full discussion of this interesting subject or to allude further to experiments in the treatment of other diseases which are not yet concluded. In the near future I shall enter more largely into the consideration of the subject in all its details. I may add, however, that I have used with excellent results, in cases in which it seemed to be indicated, the extract of the testicles of the bull and also that of the pancreas of the ox, and these investigations also will be given to the profession at an early day.

It is alleged by some medical writers that there is no difference in the therapeutical effects of medicines whether they be taken directly into the blood by hypodermic injection or ingested into the stomach; but it is scarcely worth while to seriously combat this assertion. For, while it may be true that some substances are not altered by the gastric juice before they are absorbed into the system, it certainly is not true of many others, and it is surely erroneous as regards those of animal origin. Indeed it is, I think, doubtful if anything capable of being acted upon by the gastric juice and of being absorbed into the blood gets into the system in exactly the same form in which it got into the stomach.

Thus the vaccine virus may be swallowed with impunity, as may also the poison of the rattlesnake and of other animals secreting toxic agents. Upon one occasion I gave a young dog, by the mouth, twenty minims of fresh rattlesnake poison without its having the slightest perceptible effect upon him. I need not say that this quantity would have been sufficient to kill at least fifty men. Woorara, which is, as is well known, fatal to animal life when injected into the blood, is innocuous when taken into the stomach, and even those that do possess some action when swallowed exert this power in much less degree and require larger doses for it to be produced.

Relative to the animal extracts to which this communication refers, I have ascertained beyond question that if they are inclosed in capsules so as to reach the stomach without coming in contact with the mucous membrane or the mouth, they are absolutely without physiological or therapeutical effect so far as can be perceived, even when given in quantities of a teaspoonful or more. But if dropped upon the tongue in double the quantity used for hypodermic injections, and allowed to remain in the mouth without being swallowed—thus avoiding the action of the gastric juice—they are absorbed, and exert a slower but still decided effect. If employed in this manner, three or four doses should be taken daily. Ten minims of the solution of cerebrine placed upon the tongue of a healthy person will cause acceleration of the pulse, flushing of the face, and slight headache in ten or fifteen minutes, together with the other phenomena I have mentioned.

I have expressed the opinion that the substance extracted from the brain and other organs is the material required for the nutrition of the corresponding organs of the body, but this is only a theory to which I am not in the slightest degree attached, though I think it physiological and plausible. It may be that the mixture of boric acid, alcohol, and glycerin exerts a metamorphic influence and causes the formation of a ferment having the power of restoring to the weakened brain or other viscus the lost or impaired power of assimilation. However this may be, the facts remain unaltered.—William A. Hammond, M. D., in *New York Medical Journal*, January 28, 1893.

COMMERCIAL MEMORANDA.

Pil. Cleopatrine.—As the result of an accident to the types in the advertisement of the Hall Capsule Company, whereby a figure was destroyed, the quantity of phosphorus in this excellent pill was printed one-fifth of a grain in our January issue instead of one-seventy-fifth of this amount.

TERRALINE IN PULMONARY DISEASES.—Terraline, or refined petroleum, is one of the comparatively new coal oil products and merits the consideration of the medical profession as one of the best remedies for all pulmonary diseases. I have recommended it to other parties and used it in my own family with satisfactory results, as it is not apt to derange the stomach and has not the disagreeable taste of cod-liver oil. The dose is small and this renders the medicine inexpensive. As this remedy becomes better known I feel sure that it will be more highly appreciated and fill a desideratum in medicine that has long existed. —H. E. Woodbury, M. D., Washington, District of Columbia.

CONCERNING the Anderson vaginal capsules, Dr. H. B. Maben, of Kingston, New York, has this to say: I have used the capsules almost daily ever since they were first made and find them in every respect satisfactory. I direct patients that I cannot see daily to saturate the cotton with a medical solution and introduce the capsule, which saves much time to myself and is quite as satisfactory to the patient, with equally good results. They serve as a pessary, with healing properties unlike any other mechanical support, which usually irritates and is uncomfortable. They can be introduced and kept intact where the perineum has been lacerated and the ordinary pessary will not remain. In all the ordinary diseases of the vagina and cervix, where a simple application is desired, I know of no means as a vehicle so cleanly and convenient as the Anderson vaginal capsule.

SOME NEW FEATURES IN PARKE, DAVIS & COMPANY'S LIST.—Among recent additions to the list of Parke, Davis & Company, whose constant endeavor is to add to and improve their manufactures, are the following: Fluid extract of cocillana, the Bolivian remedy for respiratory inflammations. Compressed tablets of calomel and sodium bicarbonate, two and one-half grains each. Tablet triturates of extract cascara sagrada, one grain. Antiseptic tablets, ℞ "C." Gelatin-coated pills—terpine hydrate, five grains; also strychnine nitrate, one-fortieth grain. Pill of aloes and iron, number seven huudred and ninety-seven, ℞ "A," half-strength. Normal liquid golden-seal. Improved bronchial lozenges. They also now prepare liquid extract cascara sagrada, B. P.; fluid aloes co. for dec. aloes co., B. P.; fluid sarsa. co. for dec. sarsa. co., B. P.; fluid gentian co. for inf. gentian co., B. P.; fluid rhei for tinct. rhei, B. P.

IN CONVALESCENCE.—The lack of suitable foods for convalescents from severe illness, and in the treatment of typhoid and other low fevers is often felt by the practical physician. Milk while of very great use often cannot be taken, and often causes trouble on account of the indigestibility of the casein. The various beef extracts are more stimulating than nourishing, and the majority of the prepared foods offered are either unpleasant to the taste, or difficult of digestion, and unsuited to the needs of the case. In such cases malted milk will form a very welcome addition to the dietary of the sick room. The basis of this food is pure, fresh, sterilized milk, in which the casein is rendered digestible by the action of the plant pepsin produced by a special method of malting the cereals originated by the manufacturers. It is pleasant to the taste, simply prepared by dissolving in water, no cooking required, and will be retained and assimilated in many cases when all other foods fail.

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

SOME MENTAL SYMPTOMS OF MORE OR LESS INTEREST: A MEDICAL MEDLEY.*

BY C. B. BURR, M. D., PONTIAC, MICHIGAN,
MEDICAL SUPERINTENDENT OF THE EASTERN MICHIGAN ASYLUM.

IF I depart from the usual order and give you something which shall be more of the nature of a medical medley than of a paper following out one special line of thought, do not, I beg of you, account me indolent; although I confess the work is easier of accomplishment; neither infer that I would attempt to hinder discussion by failing to give a caption which conveys an idea of the subject matter. I am, in fact, quite anxious for help over some hard places, and shall be glad to have satisfactory solutions of what to my distinguished auditors will doubtless prove simple problems.

About a year ago I was consulted by an anxious father, who said that his son had become violently insane in consequence of a fall some weeks before. It appears that in going from a jollification at night, he, with some others, had stood up in the back end of a wagon, and that some sudden move on the part of the horses had caused him to fall out of the wagon backwards upon his head and shoulders. He was stunned by the fall, but apparently suffered no bad effects from it, other than some muscular pains for two or three days. Then, of a sudden, he grew violently excited. His father's description of the case was very clear—indeed, somewhat dramatic. I have never heard a more lucid history of the progress of a malady, or a more careful account of its symptomatology. He said that the boy suddenly started from the house and ran wildly to town, a distance of several miles; that he brandished a club, of which he was with difficulty disarmed; that he procured a carving-knife and rushed about, crying for vengeance; that he "frothed at the mouth" and was maniacal. When secured and brought home he was in a much excited condition, and so continued for many days. He was of stalwart build and very muscular, and the services of all the neighbors who could be spared from their daily avocations, I should judge, were called into requisition to repress him. He had terrible convulsive seizures, and now and again would straighten out, throw himself upon his bed, or upon the floor, where he was held. He resisted the efforts of others to hold him, struck wildly at those about him, and ground his teeth savagely. His physician and the patient's friends all believed the boy's condition critical in the extreme, and feared that the excitement and convulsions under which he was laboring, would speedily terminate his life. As near as I could discover from questioning, there were no signs of local paralysis. There had been no contusion upon the head. There were no symptoms pointing to pressure upon the brain, save the convulsions, which were coming thick and fast and foreboded exhaustion.

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*Read at a stated meeting of the DETROIT MEDICAL AND LIBRARY ASSOCIATION, and published exclusively in The Physician and Surgeon.

What was the diagnosis, and what should be done for the relief of the patient? Here was a case in which there had been adequate cause for sudden maniacal symptoms. It was possible that it called for surgical intervention. There was great probability that the patient's physical condition would not bear the fatigue of removal to an institution, if such were the case; and certainly at home were no proper facilities for his care. He had exhausted the resources of the family and of the neighborhood, and something must be done.

With all these possibilities staring me in the face, it was with no little hesitation that I questioned the father with a view to drawing out something more as to the nature of the convulsive seizures from which he was suffering, and the presence in the attack, of an emotional element. I told the father frankly, in the end, that one of two conditions suggested themselves to my mind as explaining his trouble: the one, that there had been serious damage done to the nervous system through the traumatism; and the other, that the traumatism, with the possible addition of an emotional element, had destroyed self-control, and that the convulsive seizures were in a measure volitional. Eventually I became so much interested in the case that I desired to know more about him through personal observation, or the observation of an expert in mental disease. Not being able to visit him myself, I requested Dr. Morse, of the asylum staff, to see the patient, advise with his attending physician, and report upon his condition. The Doctor, fortunately, had not heard the account of the symptoms which the patient's father had given, and went to the case in a wholly unprejudiced way. "I found him lying upon the bed," said Dr. Morse, "puffing and relaxed, having just recovered from a severe convulsive seizure. The family was greatly alarmed, the attendants upon the boy were perspiring and agitated, the room was full of people, and the house in confusion. On coming to himself I questioned the boy, and found that he apparently had no recollection of the incidents which had taken place during the convulsion. Another was threatened, and I asked all of the attendants to withdraw from the room. They hesitated very much to leave me alone with the patient, but this I insisted upon. 'You are a fine muscular fellow,' I said to the boy,—'I have no doubt that you are able to down the best of them in school.' At first he paid no attention to what I said. Going on further, however, I could see that his interest was excited. 'It is a great pity that you are sick, and it will be a great pity for you to lose this ascendency,' I said to him,—'as you certainly will if matters go on in this way. You are in great danger of losing self-control completely; and you know what the result of that will be. You will have to be taken from home—perhaps to an asylum. You may get well there; probably you will; but when you come back home it won't be the same as it was before. The boys will say.—'Yes, he was pretty good, once; he was the best among us; he could down any of us, but—well, he has been to the asylum. He has been out of his mind; he is not the same boy he used to be.' The more I talked, the more interested the patient got; and I could see that the symptoms of a seizure were no longer threatening."

"If I were you," said the Doctor, "I would make every effort I could to throw off this trouble, and it is not beyond hope. If you will take the medicine prescribed for you I believe you can get over these fits right speedily." In this strain the Doctor talked with him for more than an hour. On the return of the friends to the room they were much surprised to hear that the patient had had no convulsion. Later, however, a feeble and abortive seizure occurred—"in order to let himself down easy," the Doctor thought. The prediction was made that under the use of the medicine the convulsive attacks would slowly disappear and the boy be better. This proved to be the case. Within a day or two he was able to be about, and several months after, visited the Doctor at the asylum, looking the picture of health, but betraying a tendency to introspection and hypochondriasis.

The enquiries suggested by this case are, What influence had the traumatism, if any, upon the production of the patient's nervous condition? Had it, in fact, any influence whatever? Had not the boy made this an excuse for lack of self-control, and permitted himself to indulge these eccentricities of behavior for the purpose of being interesting? We all have felt, I apprehend, at certain times how much easier it would be to give up and yield to some passing impulse, than to set the brakes. In the case of a robust boy, apparently in blooming health, with good prospects, without discouragements, with everything pleasant about him, would the desire to prove interesting be a sufficient motive to induce him to yield to states of feeling such as these?

I would add that the boy is of excellent heredity, and had never shown, previously, any symptom of mental perturbation.

MANY years ago there was received at the Eastern Michigan Asylum a patient, committed from one of the large cities in its district, who was under indictment for the offense of obtaining goods under false pretenses. He was carried into the house from the hack, his clothing disheveled and disarranged, without shoes or socks, his hair long and flowing about his face, his person unutterably filthy. Carried to a couch in the reception-room, he rolled his eyes about "in a fine frenzy," and on being questioned by the superintendent, stared at him blankly, then clutched his flowing locks with both hands. I remember well Dr. Hurd's remark at this: "Come, come, that won't do. I think I would stop that performance, if I were you; that isn't the way insane people act." He was carried to the hall, and remained for many days in a dull and apathetic condition; refused to reply to questions, and kept up a semblance of mental disturbance. On the day following his admission he ate an enormous breakfast. In jail he had been steadily depriving himself of food. He refused to reply to questions, until it was casually remarked by another that insane people could usually talk fast enough; when the following conversation took place: "What is your age?" Answer: (after a long period of silence)—"My wife knows." "Where does she live?" Answer: (after much hesitation)—"It is my mother." "Don't you know how old you are?" Answer: "She has got a farm." To similar enquiries from another member of the staff, he made almost identical replies. He regarded everyone with a sort of frightened, stupid look and appeared downcast and dejected. A day later after a free movement of the bowels following a laxative, his replies were more rational. His answer was "I don't know," or "I can't think," to many questions. For several days he required to be carried about, and helped himself scarcely at all. He complained of a feeling of prickling in his right leg, and fell when lifted to his feet. He permitted sharp pricking of the right foot, and did not wince or give any evidence of pain. He flexed the left foot, but when asked to do the same with the right, was apparently unable to accomplish the act. When asked to bend the knee, he lifted the thigh with his hands. The electrical reaction of the lower extremities was impaired. His feet were swollen. For many days his conversation continued affected and forced. To the question "Is your name ——?" he replied, "I believe not; they call me ——" (giving the same name). When asked to give his true name, he replied "I have forgotten," in a drawling manner. On the following day, after "trying to think" what his name was, he recollected, and gave it. For a week or more he lay in bed much of the time. When raised to his feet he made no effort to support himself, but settled down to the floor. Finally he made a successful effort to stand for a moment, after being told that most paralyzed men could sustain themselves on their feet and walk to some extent. His replies to questions were still largely "I don't know." When informed that proceedings against him had been discontinued, he apparently did not know what was meant, and displayed no recollection of recent events. Three days after this, however, he got up from bed when requested to do so, and with much apparent effort walked about the room, leaning against the wall. Instead of drawing the paralyzed (?) leg, he scraped the foot along the floor, by using the other one, threw the body forward, and caught himself. On this day he was transferred to a hall in the upper portion of the building. Thither he required to be carried, but on the same afternoon showed a surprising degree of strength, and walked quite readily about his room, merely limping. He could flex both ankles without difficulty and walked to the supper-table without assistance. Two days later (fifteen days after admission) the note is made about him that he was quite bright, walked easily, engaged in work, and related the following history of himself: "I am thirty-seven, am married and have a son eight years old. I was born in Pennsylvania; am a member of the Presbyterian church; have a common-school education. My father died of consumption; my mother is living at an advanced age, and is feeble in body and mind. It is rather a delicate subject to speak of, but my father had two brothers insane, and both died at asylums." He also stated that he enlisted in the army at the age of seventeen, and saw four years' service; was twice wounded, but not permanently disabled; received promotion regularly, finally becoming a captain. Soon after discharge he engaged in business, which he followed for four years, at the expiration of which time he was burned out and lost all he had. Later on he secured an appointment as mail agent, and after retiring from the service engaged in the line of commercial traveler. He said that his wife became estranged from him through the intrigues of enemies. The knowledge of this caused him to grow reckless and intemperate. On a day some months previous to his admission to the asylum he found himself at a hotel in a northern city, sick. For two weeks his whereabouts were unknown, but at the end of that time a friend discovered him. To elude him he took quarters at a boarding house. There he remained in bed for ten days, during the time losing three hundred dollars of the firm's money through theft. He returned dejected and disconsolate to a place in the interior of the state, where he remembered having last seen his sample trunks. His account led to the inference that he had been drinking heavily, and was suffering from the effects of it, though this he denied. At all events he must have been in a state of extreme mental confusion, for the incidents of his illness and wanderings were vague and indistinct. Arriving at the place where he believed he had left his sample trunks he entered into a conspiracy with another traveling man to defraud, by making purchases in the name of a successful merchant and business man residing in the northern part of the state. The plot seems to have been ill-conceived, and, as might have been expected, detection followed and led to his arrest. Of his stay in jail he apparently remembered very little, and denied any recollection of being brought to the asylum, or any of the incidents of his stay in the institution until within the past few days.

Of his conduct when in jail an interesting account was furnished by the turnkey, who says that at the time the prisoner was brought there, a United States prisoner was taken from the jail to the hospital, there got better, and ran away to Canada. The prisoner heard of the circumstance, was immediately taken sick, or feigned sickness, and refused to eat. After some time he was sent to the hospital, but a guard kept over him night and day. Finally, the hospital authorities refused to care for him any longer, and he was returned to jail. He remained in jail several months, kept his bed, and really starved himself until he looked like a sick man, and perhaps was, but this the turnkey doubted. This officer adds that later he became insane, but of the matter of insanity he knows nothing personally. "I would state, however, that during his sickness, and when, as he represented it, he could not raise his head from the pillow, I procured a ladder and climbed up to his window at 1 o'clock in the morning, looked in and saw him walking his cell, apparently as strong as any ordinary man could. I think the case here is dismissed against him, but he is wanted at G—— and C——, and another place; but whether they want him bad enough to come after him, or not, I do not know. If they do get him, and have as much trouble as I had with him, they will wish they hadn't." The receipt of this letter, it may well be believed, intensified the feeling of suspicion which existed that the patient was a malingerer, and sharpened efforts to arrive at a correct estimate of his case, and to prevent his escape from the institution. Notwithstanding all, however, the conclusion was eventually reached that the man was actually insane, and one of the causes of insanity was believed to be his efforts at feigning. After the hysterical symptoms and other manifestations pointing unmistakably to feigning had disappeared, he was often morose and reticent, for days would refuse his meals and decline to assist in work, was unwilling to speak to visitors and the medical officers, and sought his room. At other times, on the contrary, he was extremely helpful in the care of feeble patients, and for many weeks took almost exclusive care of one—a defective boy, to whose training and teaching he devoted much time, with good results. He was often irritable, and on one occasion made threats of violence toward an attendant for whom he contracted a groundless aversion. The grievances of which he complained were of the most trivial nature, and betrayed decided dementia. It was believed at the time that they arose largely from the fact that the attendant bore the same name as that of the man whom he (the patient) had represented himself to be. He himself admitted later on that his prejudice was unfounded. He was inconsistent and very unreasonable. On one occasion, when an effort was made to induce him to give to his wife the power of attorney to collect pension money for the education of their son, he, although heartily in favor of the plan, refused co-operation because of the agency in the matter of a former acquaintance. Of this gentleman he spoke in a vindictive and unpleasant way; claimed that he had "ruined" him; and this he repeated over and over in the manner characteristic of dementia. He bore opposition badly, misconstrued language, imputed wrong motives, and was occasionally threatening and dictatorial among the feebler-minded patients. He was influenced by vague suspicions, had difficulty in expressing himself clearly, and was childish. He never called himself by his own name, but insisted upon being known by the name under which he had been committed—that of the person whom he attempted to defraud. About a year and a half after admission he was discharged from the asylum. Three years later there came the following letter:—

"SUPERINTENDENT OF THE ASYLUM: *Dear Sir*—Will you kindly let me know as to the mental condition of one ———, alias ———, while in your charge? I understand he was removed from a prison and placed in your asylum. This occurred some time during the last five years. He is now confined in the ——— county jail, under a charge of false pretense, and has been conducting himself strangely of late, refusing to eat, or to take exercise. He has made quite an effort to let all persons coming in contact with him know that he has been declared insane; and from many little circumstances that have occurred since his confinement, I am very suspicious of him, and cannot bring myself to believe that he is really out of his mind. I would be very pleased to hear how he conducted himself while in your charge, and as to what you thought of him.

Very Respectfully,
(Signed by the Jail Physician.)

P. S.—He has stated that he is an epileptic, and on two occasions has exhibited contusions on the forehead, the result of falls from his bed, he states."

Were we wrong in our diagnosis? I am still inclined to believe that the man suffered from chronic impairment of mind, and was in a measure, at least, irresponsible for his acts. Given the bad heredity, vicious organization and intemperate habits of the patient, there is sufficent to account for the criminal instincts which unquestionably existed. That his refusual of food, his maundering conversation and maniacal excitement were feigned, I have no question. That the feigning of insanity with its attendant nerve exhaustion, the wear and tear upon his physical constitution from voluntary abstinence from food and exercise, produced a condition of rapid mental deterioration, I still believe. That mental degeneracy persisted after his discharge from the institution, is, in the nature of things, extremely probable. That he found himself without means of support, and returned to criminal practices as a means of livelihood, is but natural. That he displayed strange conduct in jail a second time, and feigned convulsions, is not to my mind inconsistent with the view that there was actually present a condition of permanent impairment of mind which rendered him unaccountable before the law.

ABOUT three years ago there came under my observation the case of a boy, aged twenty-one, who had been under arrest on suspicion of barn-burning. He was committed to the institution before indictment for the offense. It was stated that about ten years before, while in the field at work, he became so weak that he could not walk home, and complained very much of pain in the head. He had had pleurisy three months previous to admission, during which time his "head bothered him," and he had the grip some six or eight months before. For three months people had noticed that he was morose and irritable. He would sit by himself, apparently absorbed in thought. On one occasion he had fired a revolver at night, much to the alarm of other occupants of his room; at this time he also threw clothing about, and shattered a looking-glass across one of the beds. He tried to persuade his companions that all these manifestations were due to the agency of spirits. He had also done other strange acts. Twice he had set fire to the barns of his employer. In the first instance, suspicion did not rest upon him, but the second time he was arrested for the offense. His maternal grandfather was a so-called "witch doctor," a crank for many years, and guilty in his later days of arson. The patient's mother was regarded somewhat weak-minded. He was always irascible, but a good workman, and had the confidence of his employer. During the winter the patient was the only hand on the farm, but toward spring another was employed, for whom the patient acquired a strong dislike, and to whom he ascribed malign influence over himself. On the day of the burning he had been nettled by some remarks about a new suit of clothes. He went to the field after breakfast, but was observed to do very little work. Later he came from the direction of the barn, and the attention of others was attracted by his repeatedly turning to look backwards. Later, flames were seen by others working in the field. To the remark of one that the fire this time was probably in the barn of a neighbor, the patient promptly replied, "No, it's Mr. ———'s barn." He rushed to the barn, it's interior already in flames, but seems to have been immediately overcome by heat and smoke. Directly afterward he went into a series of spasms, and, according to the description of the gentleman who furnished the account, it would appear that he was in a hysteroid condition for many hours. Later, being arrested for the crime, he at once confessed, and related in detail that he had set a lighted candle in such a manner that after the candle had burned to a certain point the hay would ignite. During his stay in jail he denied all knowledge of the fire.

On admission, his temperature, circulation and respiration were normal, his body fairly well nourished, his countenance dull and apathetic, his pupils and special senses normal, his tongue slightly coated and sclerotics yellow. His mental action was slow, and coherency unimpaired. He had an unusually large and slightly unsymmetrical head. He submitted to the usual requirements of the institution, and was quiet. There was more or less confusion of ideas. He was suspicious and indisposed to be communicative. On the day following admission he was willing to concede that his mind was not right, expressed a desire for help and a wish to co-operate in curative measures. In conversation he initiated very little. After a few days he assisted in work, and when unemployed occupied himself in reading. His countenance still wore a worried expression. His habit when not engaged in work or reading, was to remain in one particular part of the hall, gazing out of the window. His mind acted slowly. Some questions he apparently did not hear, and to others replies were given after a long interval. To many questions his replies were that he did not remember. About two weeks following admission, in conversation with the physician, he said that he could not help his actions. In his own words: "When the fit comes on me, I have just got to do it, and then I feel better." He says that he did not care to see the barn burn, but tried to get away before anyone noticed it. He often complained of headache, and his hands were habitually wet, but he made constant improvement, both mental and physical, while under treatment. Mental depression and more or less apathy persisted, however, for many months. Eventually he complained of the lack of confidence reposed in him. He referred to the fact that he had never attempted to elope, although he had had opportunities. He also said that he had not had any impulses to set fire, and thought he could have controlled himself if he had. After the first six months spent in the institution, improvement was rapid. He talked freely about his trouble, expressed a desire to escape punishment, was remorseful and easily moved to tears by any allusion on the part of himself or others to the painful circumstances of his commitment. At the end of a year he was so far improved as to permit of his discharge.

That this patient was also insane, and wholly irresponsible for the act which he committed, I have never had any question. At the same time, that like the patient whose case has just been mentioned, he also was guilty of feigning, there is little doubt. After regaining ability to talk about his offense, he invariably spoke of it as something which he was compelled to do—that he had to do, and could not avoid. That he was remorseful for the act and feared punishment is shown by the highly emotional state into which he immediately sank, and by the hysteroid manifestations and the excitement, which were doubtless in a measure volitional. His pretension at first of absence of recollection of the incidents of the burning and of his confinement in jail, is I believe an evidence of a disposition to feign loss of memory; but the possibility of feigning symptoms of certain forms of insanity, while there is actually present insanity of another type and different symptomatology is to my mind established beyond any question by a study of this case.

"WHAT made you better?" "What determined your improvement—what was the starting point of it?" are questions I frequently ask appreciative patients convalescing from acute mental disease. Nine times out of ten the answer is returned in a vague and indecisive way. It is extremely difficult for a patient to tell what has been the determining cause of a change in mental action. Quite commonly the answer is, "I suppose it is the medicine." Doubtless in most cases improvement is so gradual that change is imperceptible to the patient. Asylum physicians look with grave apprehension upon sudden recoveries. It is not an uncommon experience to find patients brought to an institution in a maniacal condition, suddenly recover self-control after a few days, and remain rational for longer or shorter periods. It is rare, or perhaps unknown, however, to see a case of this kind go on progressively to recovery. While the transition from home to asylum surroundings, the warm bath, the change of diet, the increased exercise, the return of sleep after long wakefulness, oftentimes brighten the mind temporarily and lead to rational conduct, continuous improvement is rare under such circumstances. Brain nutrition is still feeble, the nervous equilibrium has not returned to a stable condition, and doubtless the patient's subsequent symptoms, if relapse occur—as it does, unfortunately in most instances—are intensified by the brain exhaustion consequent upon the mental strain which the apparent convalescent has exercised to keep up appearances.

Occasionally a patient dates his improvement from some particular occurrence. A man suffering from acute mania, and under treatment for several months, was most positive in his conviction that improvement dated from the extraction of an offending tooth. In another instance that I recall to mind, a patient, much confused and excitable, though playful in his tendencies, caught hold of me as I was attempting to pass through the door of his hall. He grabbed me about the waist, pinioning my arms down to my sides, and I was completely helpless. Finding me so much at his mercy, he commenced to laugh but retained his hold. I laughed also, and my efforts to free myself were futile. The attendant who attempted to give me assistance, likewise became hysterical; and then ensued one of the most ludicrous squabbles that I have ever seen. I struggled as hard as my almost totally relaxed state would permit, but unavailingly. Eventually, down we all went in a heap on the floor; and there I succeeded in getting free. From that time this patient began to improve, and during convalescence he invariably attributed the change in his mental action to our contention.

Aside from regularity in the matter of sleep, work, food and exercise, judicious medication to secure sleep and promote appetite and digestion, the most important curative agency in an institution for the insane is unquestionably the one most difficult of application at home. I refer to the sustaining discipline so necessary to the correction of vicious habits and the restoration of self-control. If the tendency of the insane patient is toward disorder, noise and untidiness, so the efforts of the physician should be directed to promoting order in dress, order in deportment, neatness in habits, and neatness in attire to preserve the self-respect and repress unnatural activity or direct it into healthy channels. In giving little attentions to these ends, we are treating the condition symptomatically. That these remedial measures cannot be carried out to the same extent at home goes without saying. Invalids of any class receive attentions and suggestions from the physician, from the trained nurse, or the casual visitor, that they resent from their own relatives. They appear at their best with those with whom they are least acquainted. In an asylum, surrounded by new faces, cared for by strangers, critically observed by their neighbors, a far greater incentive to self-control is supplied than can be given in most cases were the patient at home with anxious friends, too often bestowing injudicious attentions, doing those things which they ought not to do, and omitting those things which the necessities of the case urgently demand.

Asylum attendants have, as a rule, no fear of patients who come with a bad reputation. An experienced general supervisor, who had seen long service in caring for the insane, said that he would much prefer to receive a patient who had turned the neighborhood upside down, and who required the services of five or six robust, but panic-stricken men to transfer him to the institution, than one who, on admission, was lamb-like and resigned. This general view in reference to patients (which my own observation has largely confirmed) I find explanation for on the assumption that, in cases which have gone to such extremes at home, have terrorized neighborhoods and been the heroes of soul-stirring episodes, the volitional element in the mental manifestations predominates. In asylums this sort of conduct is ignored, or laughed to scorn, and patients who at home have made the lives of their relatives, their neighbors, and county officials a burden, find in the asylum a convenient halting place and an opportunity to let themselves down from the intensity of their activity to a reasonable level.

Why is profanity so easily acquired, so persistently retained, and lost with so much difficulty? I have an imbecile patient under observation who is unable to articulate anything except one profane expression. She does not even say yes or no, and giving forth this utterance is the extent of her powers of speech. Another patient—an epileptic woman—far advanced in dementia, can say but few words, though at one time she was quite bright and interesting in conversation. These few words are largely of the "swear" variety. Another—an epileptic imbecile—talks scarcely at all, but when elated or excited, swears with astonishing volubility. Profane words are the last to leave the paretic dement. After his atactic articulation is unequal to the simplest words, his profanity comes out blooming and fresh. What is the explanation of it?

What is the reason that an aphasic patient can sing a familiar hymn, and even learn the words of a new one from hearing it sung perhaps, and is still unable to repeat the words without the music, can talk in no other way than disjointedly, and has so little abilty to express himself as to be hardly intelligible in ordinary conversation? I have known such a case as this. The familiar illustration of the habitual stammerer, who can sing with perfection of utterance, will occur to you. What pathological relation, if any, exists between these cases?

FIFTY CASES OF TYPHOID UNDER VARIOUS FORMS OF TREATMENT.*

BY CHARLES DOUGLAS, M. D., DETROIT, MICHIGAN.

DURING the past warm season we have witnessed an unusual number of fever cases, more, I think, than during any season in the last fifteen years, save one, which was the summer of 1883. During that season we had also a great many cases.

The unusually wet weather of May and June, followed by the continued heat and dryness of the succeeding months seems to have altered greatly the sicknesses of the season, not only in their order, number and intensity, but also in their kinds. Fevers commenced from one to two months earlier than usual. Cholera infantum decreased in amount, being almost absent compared with many seasons, and causing few deaths. Dysentery was much more common than usual, and also, like fevers, was much earlier in the year, continuing until late in the fall and winter. In fact, it has not yet entirely disappeared. The same force seems to have been active in producing fever and dysentery, both in time and frequency.

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This frequency of fever this season has been my incentive in bringing the subject before this society, feeling that it would be a good time to compare notes as to its characteristics, and the treatment found successful by different members of the society. I also think it an opportune time to ask the question, " What is typho-malarial fever?" This seems to be a vexing question with some, and it is hoped that some member will be prepared to cast some light on this subject.

I propose to present you notes of thirty-five cases treated in Harper hospital, by the attending physicians and fifteen cases treated by myself in private practice. As these must necessarily have received different treatments, being under three different physicians, it is presumable that the comparisons or results will be interesting to us. The characteristics of the cases will show that no selection of cases was made for any line of treatment, and that where changes in treatment were made, they were indicated by the progress of the case. Of the thirty-five hospital cases all were adults, and many were under treatment from one to two weeks before entering the hospital. The character of these treatments was unknown, and of course very much varied. Many of the patients thus entering being in a very serious or dangerous condition when admitted, the results in these cases must necessarily be less satisfactory than where patients are well cared for and treated satisfactorily in their own homes all the time. Such cases of late admission are generally severe ones, sent to the hospital to avoid death at their homes or boarding-houses, or such cases as cannot receive nursing and treatment at home of the proper kind, and consequently are damaged unnecessarily in the beginning of their sickness. Physicians in hospitals have always to contend with these difficulties in many cases.

In a list of about thirty-five cases of fever treated at Harper hospital from June 10 to December 1, 1892, the number of days patients had been sick when admitted to the hospital was as follows: Fifteen were sick from three to seven days; eight were sick from seven to twelve days; ten from twelve to eighteen days; two had been sick twenty-eight days before admission. Average temperature curve for first week in hospital is as follows: Five from 101° to 103° Fahrenheit; thirteen from 102° to 104°; four from 102° to 104½°; five from 102° to 105°; five from 103½° to 105½°; three from 104° to 106°. Duration of time in hospital: Seven cases from fifteen to twenty-five days; eleven cases from twenty-five to forty days; thirteen cases from forty to sixty days; four cases from sixty to seventy-two days. Of these, twelve were delirious; four were violently delirious, requiring restraint in bed; the other eight were of the low, muttering variety; all complained of headache to a greater or less extent; nine had erysipelas; thirty had a dry, coated tongue and five had a moist white coat on tongue. Twelve cases had nausea and vomiting,—one of which was a woman pregnant five months. Nineteen cases had diarrhœa, and sixteen were constipated or had regular movements. Twenty-six had tympanites. Seven of them had intestinal hæmorrhage. All had more or less abdominal tenderness. Six had the lenticular eruption well marked, others had a slight eruption, and some had no eruption. Ten had a dry, hacking cough. Four had hypostatic congestion of lungs, and two had pneumonia and both died. Seven had subsultus tendinum. Five cases had plunge bath from time of admission until temperature came below 102° permanent. Of these, two had a relapse, which relapse was treated by bath. Patients were put into bath at a temperature of 95° to 100° and reduced to 60° by putting in ice, and patient was kept in the bath until temperature came down to 102°, when they were put into bed with warm blankets around them. One case was started on acetanilid for first three days, then plunge bath given, but died in four days after. This patient had a mitral regurgitant murmur. Five more cases were started on the plunge bath treatment. One had pneumonia and baths were discontinued at the end of eight days. Patient died four days after. Another one had baths for two weeks when patient had hæmorrhage and baths were discontinued. Patient died five days after from exhaustion. The other three were given baths until it was decided that they were too weak to take the bath and they were put on acetanilid or phenacetine, and recovered. Ten were started on sponge bath, but this was not satisfactory in reducing temperature and was discontinued in a short time and acetanilid or phenacetine used instead. Two died. Eight were treated on phenacetine or acetanilid from the start, a small dose being given every hour when temperature was above 102½°. All of these recovered except one, who died in convulsions with a temperature of 105½°. The other six were treated symptomatically from beginning to end. These were mild cases. The patients that received the antipyretic treatment had a more rapid and weak pulse than those who received the bath treatment. From observation of cases receiving the different kinds of treatment, I think that duration of disease was about the same in either case. Thus two died who were started on plunge baths, two who received the sponge bath and antipyretic treatment, and one who received the antipyretic from the first. Eleven patients had ice coil applied to abdomen. One of these had received the plunge bath treatment until she had hæmorrhage of bowels, when baths were discontinued and cold pack ordered instead, when temperature went above 103°. She had been getting the bath on an average every two or three hours. After ice coil was applied she had four packs first twenty-four hours, three the next, two the next twenty-four hours. Coil was kept on until convalescence was fully established. Patient recovered. In another case ice coil was not applied until the abdomen became quite tympanitic, temperature ranging from 102° to 104½°. Patient was getting acetanilid, three grains, when temperature went above 102½° The first twenty-four hours after the coil had been applied only about half the number of doses was required to keep down temperature. Patient recovered. Another case in which it was applied and temperature reduced two degrees, the patient died from exhaustion. In every case where coil was used it decreased the temperature from one to three degrees.

Of the fifteen cases treated by me in private practice this year, the ages varied from three years to eighty, and included both sexes. In the majority of these cases we had continuously moist tongues, excepting when asleep or during a few days of the most severe fever. In all, the tongues were swollen, red, and coated white, excepting during the dry stages. In none was the delirium severe and in some never appeared during the sickness. Headache was present in the first week nearly always. Some commenced with vomiting and diarrhœa, while others suffered with diarrhœa later in the sickness. In none was there hæmorrhage from the bowels, but in many epistaxis appeared during the first few days of the sickness. The roseola spots were not numerous in any of these cases. Tympanitis was present in about one-half, and most severe where the bowels were loose. The majority were constipated, which condition I encouraged or secured where possible, not moving the bowels more than once or twice a week when diarrhœa was absent. Bronchial cough was present in most of these cases, but not severe except in a few, where the lungs or a part were involved. These cases lasted from four to eight weeks and all recovered. The only features that were present in all these cases were the swollen tongue and the elevated temperature, ranging from 100° to 105°; the majority remaining below 103½° most of the time.

The treatment in all these cases was the usual refrigeration and absolute rest to all organs where possible. Small doses of acetanilid, one and one-half to two grains were given to adults every two or three hours when needed to reduce temperature below 102°. During the stage of highest temperature this was given regularly night and day, to hold the temperature below 104° at most. When this dose did not succeed the cold water coil was applied to the abdomen and run continuously night and day, at a speed and coldness sufficient to reduce the fever to the desired point, 102° to 103°, ice being used if needed. The results from the cold coil were most gratifying to the patients, securing rest, comfort and sleep, to such an extent that some demanded its continuance regularly, and notified the nurse immediately when the water was out or not running freely. It is the only treatment that I have seen that ever controlled or changed the size and color of the tongue prior to the subsidence of the sickness. I have never seen any bad effects from using acetanilid in these small doses in these cases.

The dietary consisted of not more than three pints of milk in the twenty-four hours, and where beef-tea was taken, an equal reduction was made in the milk supply. In no case was any solid food allowed, or starches, until the temperature was normal for five consecutive days, or below normal, and the tongue also was clean and had returned to its normal color and size. Feeding, before *all* these features have been obtained, has invariably in my cases been followed by a relapse, which lasted usually from twelve to sixteen days. Cold water was allowed always when the stomach was not offended by it in addition to the milk supply. In many of these cases not more than a pint of milk was taken daily during the hot stage of the fever, and nothing else was allowed.

I have found my cases with a constipated condition of the bowels progress more satisfactorily than those where the bowels were loose, and were seldom troubled with tympanites, never with hæmorrhage. So much have I found this the case that I aim at procuring this habit, where it is not already present. This requires the use of some opiate. I have never seen any bad results from constipation in these cases and often have patients pass a week or ten days without a stool during any stage of the fever.

I give occasional doses of hydrargyrum cum creta to all cases, especially where the tongue is dry. In diarrhœa accompanying the fever I have found tympanites and tenderness of the abdomen usually present and all these symptoms yield nicely to turpentine and opiates. The turpentine seems to act as a disinfectant and stimulant also to the irritated mucous membrane, and soon removes the diarrhœa and causes thereof. In my hands no remedy or combination has acted so well for this weakness.

To move the bowels I prefer the enema to a laxative. The latter will at times disturb the alimentary canal severely and even dangerously where there is ulceration, and often causes a distinct rise in temperature. Certain it is that those cases are always injured by continued purging, and often by a single purge. I saw death in one case undoubtedly due to a purgative causing rupture of the bowel.

In treating of a subject that is so old and has been so well treated for many years there must necessarily be some repetition of facts well known for half a century, perhaps. Their importance and strength is sufficient excuse for so doing. As you will have seen this paper presents nothing new,—the object being to simplify all parts of the disease and treatment as far as possible, and select the simplest diagnosis and treatment for this fever, that is possible.

My opinion is that all these cases are typhoid, which show this long continued elevation of temperature, and the only accompanying feature which is always present is the enlarged and reddish tongue. All other symptoms of tongue, lungs, bowels, delirium, skin, etc., may or may not be present, but this does not affect the diagnosis. If this conclusion is true, then where are the cases of typho-malaria? Certainly I see none of them in my patients, and I have long felt it a pity that efforts should be made to draw indistinct lines of demarcation between cases of fever that run the same course practically and require exactly the same treatment. Having diagnosed the fever as typhoid it is next desirable to simplify the treatment, and not only to simplify it but to do this in the most pleasant and acceptable manner to the patient and friends without sacrificing any part of the success. It is now generally understood that the principle of the treatment is to keep the temperature below the point where the leucocytes are destroyed until the poisonous ferment is exhausted. This in practice seems to be below 103° Fahrenheit, or nearly that point. While doing this, of course, we must watch that no concurrent irritations run away with our patient. How to do this—reduce the temperature—is one of the main features of this paper, and will, I trust, be ventilated well by the discussion. The methods that I have used and found satisfactory, I have before enumerated.

TWO CASES OF "PELVIC ABSCESS."

By EUGENE BOISE, M. D., Grand Rapids, Michigan.

I am induced to publish the records of the following cases, because they illustrate very well the difference between true and false conservatism, concerning which so much has been said lately:

November 22, 1892, I was asked by Dr. Johnson to see Mrs. V., married several years, but never pregnant. The history of her present illness dated back six weeks. When she was visiting in Chicago she was taken suddenly ill with symptoms of pelvic inflammation, but soon recovered sufficiently to come home; and at once sent for her family physician, who, after a few days, asked me to see her.

At that time she was confined to bed, suffering severely from pelvic pains, and had a temperature ranging from 99° to 100.6°. The pelvis was filled with a hard, somewhat irregular mass behind the uterus and crowding that organ forward against the bladder so firmly as to cause retention of urine. I saw her at intervals with Dr. Johnson until November 29, 1892. The intra-pelvic swelling having increased rather than decreased, and the temperature indicating the certain presence of pus, an immediate cœliotomy was advised both by Dr. Johnson and myself. Further counsel being desired, she was seen November 30 by Drs. Peterson and Hake, who concurred in the diagnosis and advice.

She was therefore removed to Saint Mark's hospital and prepared as carefully as possible for operation. She was much exhausted, but otherwise about the same, constant pain and tenesmus, owing to the pressure of this mass on the rectum, no desire for food and constant fever.

December 1, assisted by Dr. Peterson, I opened the abdomen, and at once was able to demonstrate a typical pyosalpinx and ovarian abscess. The fundus of the uterus was crowded forward and upward and lay directly under the opening, while curving away from the left side was the Fallopian tube at least an inch in diameter, and dipping down into Douglas' cul de sac, where it united with an ovarian abscess as large as a large orange. It was intimately adherent to the surrounding tissues and rectum, but the adhesions, being recent, yielded readily, and allowed the complete enucleation of the mass without injury to the bowel. The pedicle was tied and the mass removed. The right tube was then found to be as large as the left and dipping directly downward toward the rectum. At its fimbriated extremity was an abscess not quite as large as that on the left side. The adhesions were easily separated and the mass brought out, tied and removed, considerable pus escaping into the cavity of the pelvis. The cavity was rapidly and thorougly flushed with several gallons of water, a drainage tube placed and the wound closed with silk-worm sutures. The patient suffered slightly from shock, but more from the exhaustion consequent on her long illness, and for two days did not seem to rally well. But after the removal of the drainage tube her temperature fell to normal, she became cheerful and convalesced without an unpleasant symptom.

Early in July, 1892, I was asked by Dr. Earle to see Miss S., aged thirty years, unmarried. I found her very much emaciated, with a temperature two or three degrees above normal. She gave a history of good health until December, 1891, when she had an attack of inflammation in the pelvis. Her physician treated her conservatively, and sent her to Saint Mark's hospital, where she was treated by douches, etc., for one or two months, and was then discharged improved. She soon came under Dr. Earle's care, who, recognizing the seriousness of her condition, sent for me. At my suggestion she was again sent to Saint Mark's hospital, where she was examined under chloroform by Drs. Earle, Peterson, DeVore and myself. The uterus was normal in position and size, but held firmly fixed by masses of adhesions and chronic inflammatory exudate; while behind the cervix was a sinus from which pus was freely flowing. This could be traced upward and to the left. It was decided to get her in as good condition as possible preparatory to cœliotomy, which was made July 14, Drs. Earle and Peterson assisting, and DeVore being present.

After the usual careful preparation the abdomen was opened in the median line by an incision nearly three inches long. The intestines were small but injected, the omentum adherent to pelvic viscera, and the pelvis roofed over by dense adhesions. On breaking through these a tense, smooth tumor was found on the right side of the pelvis, evidently an ovarian abscess. With difficulty could I find a point where I could begin extirpation, because of the dense and firm adhesions, but it was finally accomplished. The sac was ruptured during removal and the pelvis filled with foul pus. The ovarian artery was tied, but there was no very free hæmorrhage. The sinus leading into the vagina was now found to be open, and could be traced by the finger into a cavity lying directly upon and to the left of the rectum and under the sigmoid flexure, to both of which it was so densely adherent as to render removal impossible. The abdomen was therefore thoroughly flushed—large quantities of water being used; the abscess sac and pelvis packed with gauze—a strip being carried through the sinus into the vagina. The wound was closed with silk-worm gut sutures, and dressed as usual.

The operation lasted only one hour and six minutes, and though there was some shock, the patient rallied nicely. There was no nausea until after twenty-four hours, at which time peptonized milk was administered in small and repeated doses. Vomiting soon occurred and continued with very short intervals, till a few hours before death. Some gas passed per rectum the first and second days, but not afterwards. I attempted by all possible means to secure a free movement of the bowels, but could not accomplish it. The abdomen became very tense and distended with gas, but not tender. The temperature varied from 97° to 98.6°; pulse 100 to 120. About the beginning of the fourth day the patient died.

An autopsy was made twenty-four hours after death, and the gauze removed. The pelvis was clean, except as to some plastic lymph. There were no evidences of general peritonitis. The abscess cavity was clearly defined and located as described, but was so intimately adherent to both rectum and colon as to render removal impossible without tearing the bowel. The intestines were not much injected, but were greatly distended by gas down to this abscess; below this point they were collapsed. From the apex of the abscess there was a dense band of adhesions passing directly across the sigmoid flexure of the colon, and completely shutting off its caliber. Cause of death: intestinal obstruction by band of adhesions—the result of former inflammation.

These cases are illustrations of the conditions frequently existing in pelvic cellulitis, or pelvic peritonitis (so-called). They were identical in their onset, pathology and course up to a certain point.

Case number one was operated upon promptly, before the plastic exudate which always surrounds such abscesses had become so firm as to be troublesome, and all the diseased tissues were removed, the patient being to-day in good health.

The other being treated more conservatively (?) during the critical stage, was condemned to chronic invalidism, and at last the operating table after the adhesions had become so dense and firm as to preclude removal of the abscess sacs—and the patient is dead.

I do not intend to discuss the etiology and pathology of these conditions further than to say that nearly all observers unite in attributing them to the leakage from the open end of a diseased Fallopian tube; and when there has been one attack, there is great probability of recurrence. Recognizing that fact, I am naturally forced to believe that the best interests of the patient demand early removal of the diseased tubes. By temporizing and treating these cases expectantly, we are inviting death, or at best chronic invalidism.

LECTURES.

SLIGHT AORTIC STENOSIS OF LONG STANDING, FOLLOWED BY OVERSTRAIN OF THE HEART AND DILATATION.

BY JOSEPH M. PATTON, M. D., CHICAGO, ILLINOIS.
PROFESSOR OF INTERNAL MEDICINE IN THE CHICAGO POLYCLINIC.

THIS young woman is twenty-three years old and married. She states that she had rheumatism when she was ten years old, but not since that time. She comes to the clinic on account of a cough that she has had for two months. She also says that she has recently had slight pains in the region of her heart, with some palpitation, and occasionally slight dizziness. On examination of her lungs we find nothing to account for her cough. Her heart is beating rapidly. The action is forcible; the area of cardiac impulse is increased. On percussion, the area of dullness extends to the nipple line; it is also displaced downward about half an inch. On auscultation in the mitral area we hear a faint systolic murmur transmitted only a short distance to the left side. Over the aortic valves there is a slight prolongation of the first sound, indicating that the aortic valves are somewhat stenotic. Now, this stenosis at the aortic valve is probably of long standing and due to the rheumatism that she had in early life. This condition would account for the moderate hypertrophy of the left ventricle and for the slight displacement of the heart downward. At the present time, however, we find the left ventricle dilated. The dilatation is relatively greater than the slight hypertrophy that has taken place; we must seek a cause for this dilatation. It is evident that the dilatation is not the result of degeneration of the heart-muscle, because the muscle, as you will observe by the character of the heart's action and the quality of the first sound, is in good condition.

The patient tells us that she is a dancer by profession and has followed this occupation for a number of years, for several hours each day, and that lately some of the figure-dancing has been especially hard, and that she has noticed that it was more difficult for her to do than formerly. This would explain the cause of the dilatation. Given a heart slightly hypertrophied on account of moderate aortic stenosis, we have a condition in which compensation has been effected, and which would probably have given no trouble if she had not been subjected to overstrain; but the violent action of the heart necessary in the active exercise of dancing raised the intra-ventricular pressure to such an extent that the cavities of the heart were dilated, the mitral ring was slightly stretched, and she has a slight relative mitral regurgitation, which explains the production of the mitral murmur now present. It also explains why we should have a dilated ventricle with so good a heart-muscle. The condition would come under the head of idiopathic enlargement of the heart as described by Fræntzel. Fræntzel, Leyden and Schott, have described cases of cardiac dilatation resulting from acute overstrain of the heart.

Now, in treating this case, the first thing to do is to relieve the heart of any such strain. The woman must stop her dancing. If she does this the condition will diminish of itself, the dilatation will subside, and the heart may be able to perform all the labor required of it. To quiet the action of the heart and the nervous arhythmia present in this case we will give her ten grains of sodium bromide, with half a drop of tincture of aconite, three or four times a day. She will also be given some general tonics; her diet will be regulated; and if she will give up her dancing we can safely assure her improvement.

THIS young woman is also a dancer. For the past three or four months she has been troubled with palpitation of the heart, some dyspnœa, and some dizziness. On examination we find the action of the heart more forcible than in the other patient. The limit of dullness is not so much displaced to the left, and it is also very slightly displaced downward. There are no abnormal valvular sounds to be heard in this case, and the signs are simply those of moderate hypertrophy on the left side. This hypertrophy in so young a girl, in the absence of any valvular lesions or any abnormal condition of the vascular tension, in the absence of any evidence of disease of the kidneys or any of the organs, can only be explained by the nature of her work. The enlargement of the heart, due to the strain of dancing in this case, is one simply of hypertrophy. In the other there was an already constricting valve at the aortic orifice which modified the conditions and therefore we would have dilatation under the same conditions as we get simple hypertrophy in this instance.

These cases are interesting as showing the abnormal conditions of the heart that may develop simply as a result of overstrain.

This girl should also be made to change her occupation. She should be placed on the same treatment as the other case, and although one is a case of hypertrophy, and the other one of combined hypertrophy and dilatation, the treatment would be the same in both instances, because the heart-muscle is good and we have virtually the same conditions to counteract.

CORRESPONDENCE.

LONDON LETTER.

THE COLLECTION OF BILLS.

So far as eighteen hundred and ninety-three has gone, it has been fairly satisfactory from the physician's point of view, and as now is about the time when the public begin to think of paying their bills, most practitioners are in a rather happier frame of mind than usual. There is a tendency among the younger members of the profession to render accounts at three-monthly intervals, as it is rather hard on young men to be obliged to wait for, never less than six months, and more frequently than otherwise, twelve and fifteen months, to receive the return for their labor. Among the poorer classes, many doctors have found it necessary to work their practice on a cash basis, as the working people of this country are often found to be of a migratory turn of mind.

VACCINATION AND SMALL-POX.

SMALL-POX—and its usual attribute, a rush to be vaccinated—is causing the health authorities no little anxiety, as the climate of Great Britain, especially at this time of the year, ably assists such a disease to get a footing, and consequently all are doing their utmost to keep it down. Notwithstanding all the precautions, it seems to be making headway, although the number of fatal cases is not large. The family physicians are reaping a harvest, as most of the adults are being inoculated under the belief that prevention is better than cure. The anti-vaccinators are rather inclined to take a back seat in the meantime, but, as usual, they have plenty of reasons yet remaining to support their belief in the futility of vaccination.

MUTUAL BENEFIT MEETINGS.

SUCCESSFUL meetings for the mutual benefit of medical men have been held in nearly all large centers, but as it is now becoming lighter at nights the sessions will become less frequent.

THE BRITISH MEDICAL ASSOCIATION.

A GREAT amount of interest is being manifested in the annual conference of the British medical association, to be held near the banks of coaly Tyne, to-wit, the city of Newcastle, the metropolis of the coal industry. The meeting is to take place in the beginning of August, so that there is plenty of time for interested parties to get their papers prepared. It is being looked forward to with more than ordinary interest, as there is to be a debate upon the cholera epidemic, and much valuable information is looked for.

ANTI-CHOLERAIC VACCINATION.

AT the present time the idea of anti-choleraic vaccination is engaging a deal of attention, and in Paris—that city of medical and surgical resources, and the province of many medical kindred achievements—a number of experiments have been made. Unfortunately such experiments require to be backed by *time*, and if, as most people suppose, the dread disease will again break out with the advent of warm weather, there is not sufficient time to test the plan of preventing its attacks, or at least keeping down the virulence of the plague.

The French are certainly most ingenious, and withal, fearless in their endeavors to suppress human suffering, no fewer than fifty doctors and students having expressed their willingness to be operated upon in furtherance of the scheme to baffle with the choleraic symptoms.

PANCREATIC JUICE AS A REMEDY FOR DIABETES MELLITUS.

THE treatment of a malady which is steadily increasing in these islands —diabetes mellitus—has been engaging the attention of several eminent doctors who make a specialty of these complaints, and it seems that the introduction into the system of pancreatic juice has a wonderfully beneficial effect on the patient. The improvement, so far as can be made out, seems to be dependent on the method of administration, but reports are somewhat conflicting, and further investigation is necessary before the matter should be generally taken up.

THE INCREASE OF CANCEROUS DISEASES.

CANCEROUS diseases throughout Europe are on the increase, and several new proposals (yet premature as to results) are being eagerly discussed in high medical circles. It is to be hoped that the medical men engaged in the pursuit of additional knowledge regarding this subject will make their opinions known to the profession without delay.

EWOC.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, DECEMBER 5, 1892.

THE PRESIDENT, FREDERICK W. MANN, M. D., IN THE CHAIR.

PATHOLOGICAL SPECIMENS.

DR. E. T. TAPPEY presented a testicle removed Saturday. There was chronic inflammation of the gland and a very thick, cheesy matter which was perhaps tubercular. Patient received an injury ten or twelve years ago by a baseball. He has some symptoms of tuberculosis, as, for instance, the finger nails. The doctor also reported the following cases:

MR. PRESIDENT AND MEMBERS OF THE SOCIETY: I wish to report the following two cases for the purpose of placing upon record a complication which was common to both. I have never seen any report of such accident happening in just this way.

Case I.—Mrs. H., aged about thirty-five years. Confined May 9, 1892. There had been laceration of cervix and perineum for many years. I operated for repair of both May 26, 1892, choosing this early date because patient was anxious to leave the city as soon as possible. The point of interest in this case is, that immediately following the operation and the use of chloroform, there was complete paralysis of the extensor muscles of the right forearm causing "drop-wrist" as in lead poisoning. This came on without any predisposing cause, as far as could be learned, and gradually disappeared, having lasted in all about two months. The Faradic current was used each day, but I thought at the time that the patient would probably recover without it.

Case II.—Mr. D., single, aged twenty-eight years. Had enlarged left testicle for about ten years. This has dated back to a blow by a baseball. Patient had just recovered from what was called typhoid fever when I first saw him. Testicle became inflamed and one or two abscesses were formed, that is, the abscess pointed at two points on the surface. I removed the testicle, being careful at the same time to remove all diseased skin. The wound was not infected at the time and union was very prompt and satisfactory. Operation was performed December 3, 1892. Chloroform was used as anæsthetic. This operation like the preceding one was promptly followed by paralysis of extensor muscles of right forearm, and like the other patient this one gradually improved, so that at the date of writing, January 23, 1893, patient uses this hand nearly as well as the other and has not had the Faradic current for about a week.

It seems to me probable that there was a common cause for these paralyses. Of course there was some cause in each case. Can it be that chloroform affected the nerves supplying this group of muscles, just as it frequently does that controlling respiration and the action of the heart? You will all remember the strong contraction of the flexor muscles of the forearm while chloroform is being administered. This is usually a transitory effect of chloroform, and due probably to paralysis of the extensor group as well as to contraction of the flexor group. These two cases exemplify to my mind simply a more lasting effect of chloroform upon the extensor muscles.

DISCUSSION OF PAPERS.

Dr. L. E. Maire read a paper entitled "Opening the Mastoid for Non-Suppurative Inflammatory Diseases." (See the February issue of The Physician and Surgeon.)

Dr. Geo. E. Frothingham: I can most heartily endorse most of what has been said. The history of the operation is a very interesting one. It was first proposed and practiced for the purpose of liberating retained pus and removing carious bone. Very soon it became extended for the relief of conditions for which it was not applicable, such as tinnitus aurium, etc., and some fatalities have followed the performance of the operation, bringing it into disrepute, until ten years later it was again taken up, and now again it is being extended and is a justifiable and beneficial operation especially when the presence of pent-up pus can be demonstrated. In many cases it has been impossible to say just when to do the operation, and it was discovered by accident that trephining the mastoid was followed by relief of pain, even when pus was not present. Primary inflammation of the mastoid cells is rare, but it does sometimes occur as mastoid abscess without inflammation of the drum or adjacent cavities. Inflammation of the mastoid cells demands operation to prevent periostitis, abscess, or necrosis. The trouble is to determine just when to do the operation, especially as some cases will make a good recovery without operation, and men of great experience will hesitate unless there is very distinct evidence of pus or inflammation. In the absence of these conditions the operation should not be done, unless the pain is very great and makes the patient's life miserable. The operation itself is not devoid of danger. Some fatalities have followed its performance, but if other means fail and the pain continues we should not hesitate to operate. The anatomical distribution of the parts and their wide variation in different individuals makes the operation a delicate one. The depth of five-eighths of an inch is considered safe operating, but, in these two specimens which I show, drilling to that depth would have opened the lateral sinus. Buck's drill, I consider a dangerous instrument with which to perform this operation. I consider the operation by beginning on a level with the auditory canal and gradually chiseling down to the apex not only a safer method but also the procedure by which retained pus in the mastoid cells is more likely to be reached. The distance between the mastoid cells and the lateral sinus is very variable. Making the operation with Buck's drill is particularly dangerous.

Dr. F. W. Mann: Is there not a constant relation between the position of lateral sinus and the form of skull?

Dr. Frothingham: We have no data upon which we can depend.

Dr. Hedly Williamson: Politzer does not use the drill.

Dr. J. H. Carstens: I do not think that this is a very dangerous operation. These cases should be operated upon early. Pus is not always the worst kind of fluid, for there may be a fluid apparently benign but loaded with numerous bacteria and this may perhaps account for some of the symptoms. I believe a greater number of cases die from non-interference than when the operation is performed early. In cases where there is pus the chisel will make a better drainage wound. If we are uncertain about the presence of pus we should make an exploratory operation. Don. M. Campbell, M. D., Secretary.

STATED MEETING, DECEMBER 19, 1892.

THE PRESIDENT, FREDERICK W. MANN, M. D., IN THE CHAIR.

PATHOLOGICAL SPECIMENS.

DR. F. W. ROBBINS exhibited a stone which had been removed by the lateral perineal operation.

DISCUSSION OF PAPERS.

DR. CHAS. DOUGLAS read a paper entitled "Fifty Cases of Typhoid under Various Plans of Treatment." (See page 106.)

DR. J. FLINTERMANN: Cases which are neglected in the early stages and then brought to the hospital stand but a poor chance. There are a great many cases of hæmorrhage in hospital cases. The hospital cases do not present the best results from various forms of treatment, because many of them are neglected in the earlier stages. The fifteen private cases show the good results of systematic treatment from the beginning. It would be difficult to lay down any line of treatment to apply to all cases. The chief factor to be combatted in these cases is the temperature. One early report showed a good result in simply keeping the room well ventilated and cool. The patient's condition and peculiarity would determine or not whether we should give acetanilid, phenacetine, or antipyrine. The point taken by DR. DOUGLAS, about leaving the constipation alone and not interfering with the bowels if they are constipated, is a good one. In medical reports of the late war, it is shown that several severe cases of hæmorrhage followed the administration of cathartics. The diet as laid down by the doctor is a good one. Should we always look upon the fever as the only factor? or, should we consider also the delirium and other conditions which show themselves? To what are all those other conditions, such as gangrene of the skin, embolism, and thrombosis, due? is an interesting question. And what can we do for these patients? is a practical one. Every case should be studied carefully and individually and those indications met as they arise. Sometimes a patient will die very suddenly from embolism. There are cases also in which the patient cannot swallow; this is due either to stupor or paralysis of the pharyngeal muscles. Pneumonia, erysipelas, and meningitis are complications. Are they caused by the same poison? In cases where pneumonia or erysipelas supervenes, the patient usually dies; in the pregnant state also it is very fatal.

DR. E. A. CHAPOTON: I have been formerly a strong advocate of the baths but they are difficult to carry out in private practice, largely on account of the prejudice which people have toward them in febrile diseases. I now use a combination of thymic acid, quinine, and acetanilid. I like the treatment of baths when it can be carried out, but we have trouble sometimes in obtaining the consent and coöperation of the patient and friends. Frequently the patient will get up in bed without assistance and die of collapse, but in all cases where the patient remains quietly in bed the results of treatment are usually good. The continual sweating is very unpleasant. The thymic acid is the agent which causes the perspiration. Different epidemics of typhoid are differently characterized. The present epidemic did not stand the cold baths very well. In Saint Mary's hospital we have had three deaths in the present epidemic. The first was a case of recurrent hæmorrhage in a pale anæmic patient. The hæmorrhage came on about the twentieth day and in spite of all treatment she died. The second case was one of relapse after a long siege of treatment. On the sixth day after the temperature became normal, and in spite of warnings to the contrary, he obtained some solid food from one of his neighbors and suffered a relapse from which he died. The third case was one of violent delirium and he died two days and a half after being admitted. I was somewhat surprised at hearing Dr. Douglas base his diagnosis so much upon the tongue. There are varieties of typhoid in which the tongue is not large and red. In Dr. Douglas's case occurring during pregnancy did he have the urine examined?

Dr. Douglas: Yes.

Dr. Chapoton: In a case coming under my observation, a patient seven and one-half months pregnant came down with typhoid fever. For a few days no movement could be detected, but the fœtal heart could be detected and at the end of the fever she was successfully delivered.

Dr. Carl Bonning: This is a timely paper. Typhoid is a very frequent disease in Detroit. Typho-malaria is not a good term and should be dropped forthwith. It is a bridge to cover over an error or a defect in diagnosis. Dr. Douglas had good success in the treatment of his cases. My own treatment still is the cold water treatment. The American profession is taking it up more and more. Put your patient at once into cold water. I have had only four fatal cases since I began using the cold water treatment, three of these were hopeless from the beginning. Johnston, of Grand Rapids, has had good success from this treatment. Three per cent. of fatalities is the way the statistics stand in this plan of treatment.

Dr. Tilton: I myself had typhoid fever and lost seventy-five pounds. Had night sweats twice a night and afterward had dysentery, and through it all I could get out of bed. The following year I had remittent fever and could not get out of bed at all. During the typhoid I had great hæmorrhage. Subsulphate of iron blocked the bowels for nine days. A tremulous tongue is also present. The cadaverous odor was also well marked. The carbolate of soda is good in such cases. Chlorine water from the beginning will improve the tongue and general condition, shortening the course of the disease. At Fort Wayne the water has been boiled and we have had no typhoid or cholera.

Dr. J. Flintermann: The term typho-malaria was used in the United States hospital during the war; so that is the way it first began to be used in the medical history of the rebellion. There is now a good deal of skepticism as to the value of the term typho-malaria.

Dr. J. B. Newman: This is a continued fever which cannot be checked. The poison acting on the nerve centers is supposed to be microbic. No rules can be laid down for the treatment of these cases. I do not like the idea of laying down the cold bath as a routine treatment in these cases. I never use the plunge bath, the shock being too great.

Dr. J. H. Carstens: I was recently called to a patient, eight months pregnant, who had a remittent fever. Labor supervened eight and one-quarter months. The fever kept right on. Did she have puerperal or typhoid fever? Her temperature went up to 107° Fahrenheit. The treatment consisted of large doses of quinine—five grains every two hours—acetanilid, arsenic, and a little mercury. After eleven weeks the temperature became normal.

Dr. Chemmelliecek: I have found a combination of salve and bismuth excellent. Of sixteen cases so treated, two died. In combination with this treatment, I use a cold coil, and stimulate with kumyss mixed with rhine-wine.

Dr. Geo. E. Frothingham: The question of prevention is the important one, and prominently before our minds rises the question of the advisability of boiling our drinking water, and if it is boiled it should not be mixed with ice. The general sanitary condition of the city and the contagious nature of the disease should be impressed upon the community. There are great differences in the severity of the different epidemics. The temperature curve does not always give us a reliable diagnostic point. The contagiousness of the disease is undoubted, and the attendants upon patients sick with typhoid should be properly warned and protected. The typho-malaria, I look upon as a good and efficient name.

Dr. G. W. Stoner: Does any other member know of an attendant contracting typhoid from a patient?

Dr. L. E. Schell: I know of no such case occurring in Harper hospital.

Dr. J. B. Newman: I know of cases that have been contracted by attendants.

Dr. E. A. Chapoton: I have been in attendance in the wards of Saint Mary's hospital for sixteen years and have never seen a nun, or a patient in an adjoining bed, contract the disease from a typhoid fever patient.

Dr. Geo. E. Frothingham: I have myself known many cases that prove this to be a distinctly contagious disease, and many cases have been cited by physicians of cases convalescing from typhoid coming into a district in which no typhoid had ever been known and spreading the disease broadcast.

Dr. Chas. Douglas: **Dr. Frothingham**'s cases of typho-malaria are typhoid complicated with malaria. Contagion is a very important element to keep in mind.

Don. M. Campbell, M. D., Secretary.

STATED MEETING, JANUARY 9, 1893.

The President, FREDERICK W. MANN, M. D., in the Chair.

PATHOLOGICAL SPECIMENS AND CASES.

Dr. A. E. Carrier presented a patient who had a peculiar dark pigmentation all over the body.

Dr. Donald Maclean exhibited a case of primary amputation of the leg at the hip-joint. The injury occurred on the Michigan Central railroad, and absolutely skinned the lower extremity. The wound was filled with gravel and other debris and the femoral artery exposed. The operation of amputation of the hip was done eight and one-half hours after the injury, and the recovery, as you see, is a perfect one.

Dr. Theo. A. McGraw: I must congratulate **Dr. Maclean** very much upon his case. Here is a vermiform appendix removed from a patient whose trouble had been diagnosed appendicitis. The symptoms were pain, bloating and tenderness. I made an incision into the peritoneal cavity and found a condition of general peritonitis. This appendix was removed and no inflammation ulceration or inflammation of the organ could be detected. This was a case of inflammation beginning and having its chief focus in the cæcum.

Dr. Walter P. Manton: Here is a simple multilocular ovarian cyst. The interesting feature of the case was the age of the patient—sixty years. The growth had been diagnosed by another physician as a fibroid tumor and non-interference recommended. She made a good recovery.

Dr. J. H. Carstens: **Dr. Carrier**'s patient is an important and interesting one. He had a good many mercurial inunctions and then took a number of mercurial baths at Mount Clemens, and perhaps the action of the sulphur in these waters and the mercury being eliminated by the skin produced this very peculiar discoloration. It would be interesting if some of our chemical experts could give us the exact chemical reaction which took place.

Dr. J. J. Mulheron: What is **Dr. Carrier**'s diagnosis?

Dr. A. E. Carrier: I have made no positive diagnosis.

Dr. J. J. Mulheron: I would like to state that the patient was previously under my care and if the Doctor will inquire closely he will find that he has been considerable of a rounder, and also that he made very marked improvement under a course of Donovan's solution. There may be here some disease of the suprarenal capsules.

Dr. A. E. Carrier: I cannot see that he has any symptoms pointing towards disease of the suprarenal capsules.

Dr. G. Frank Lydston, of Chicago, Illinois: It is very difficult to make a positive diagnosis in a case of this kind. I do not think that the mercurial inunctions and the sulphur baths have had anything to do with this case. It is probably some interference with the proper innervation of the skin—some tropho-neurosis. Chemical analysis would quickly and easily tell us whether or not there is any mercury deposited in the skin.

Dr. Donald Maclean: Did **Dr. Manton** make a positive diagnosis of multilocular cyst before he opened the abdomen? In a case where there is so much solid material and so little fluid, the diagnosis is often very difficult.

Dr. Walter P. Manton: A positive diagnosis was made before an operation was undertaken, by the history given, the symptoms, and the physical examination. In a woman of any age, old or young, in a case of this kind, if the patient be suffering and her physical condition would admit of it, I would not hesitate to operate.

Dr. G. Frank Lydston, of Chicago, Illinois, read a paper entitled, "The Etiology of Hypertrophy of the Prostate."

Dr. Donald Maclean: This is an obscure subject and has not been fairly dealt with in the ordinary text-books. The paper which we have just listened to is the most complete and concise explanation of the subject that I have ever read or listened to. It is thoughtfully, carefully, and well worded, and **Dr. Lydston** should be congratulated upon the evidence of close research which his paper exhibits.

Dr. Theo. A. McGraw: I have been much pleased with **Professor Lydston**'s paper. I have not been in the habit of looking so far back for the trouble in its beginning. I have been in the habit of looking upon enlarged prostate in many instances as tumors analogous to the fibroid tumors of the uterus. I have cut through both kinds and found them almost alike in structure. While I have not very thoroughly investigated the subject, I would be slow to accept the theory that they are altogether glandular enlargements. Cohnheim's theory has been acceptable to me here as in tumors of the uterus, that is to say, there has been deposited in this region residual cells, which have failed to form a physiological connection with the surrounding cells; and have subsequently taken on a pathological growth resulting in a new growth or tumor. I believe also that there are different kinds of enlargements; some are such as would result from Cohnheim's theory, and others are merely enlargements of the physiological tissues as they exist.

Dr. Donald Maclean exhibited a new form of catheter for the removal of the urine in, and the treatment of, enlarged prostate.

Dr. G. Frank Lydston showed how an ordinary English catheter could be utilized in overcoming the obstruction in enlarged prostate. Structurally, some tumors of the prostate are analogous to uterine fibroids. I do not look upon the prostate as the analogue of the uterus. A great many enlargements are purely glandular in their beginning, but become fibroids by the absorption of the glandular elements and their replacement by fibrous tissue.

Don. M. Campbell, M. D., Secretary.

STATED MEETING, JANUARY 16, 1893.

The President, FREDERICK W. MANN, M. D., in the Chair.

PATHOLOGICAL SPECIMENS.

Dr. Henry W. Longyear presented a specimen of ulceration of Peyer's patches from a case of so-called walking typhoid. The patient showed no signs or symptoms of typhoid, but his fever was not influenced by quinine. He went to bed on the sixth day and died on the fifth day after going to bed, having previously developed the signs and symptoms of genuine peritonitis.

Dr. J. H. Carstens: Perhaps this man might have recovered had a laparotomy been performed.

Dr. Longyear: This was thought of and suggested, but the consent of the friends could not be obtained.

Dr. H. O. Walker presented the following specimens and reports of cases: (1) Murphy's buttons, for intestinal anastamosis, with specimen. Results of operations have been good. (3) Portions of a catheter removed from a bladder. These specimens were removed from a patient who had had typhoid fever; the pieces had remained in the bladder for some weeks. (3) Uterine appendages.

Dr. J. H. Carstens exhibited the following specimens: (1) Chronic inflamed ovaries removed from a patient who had suffered much with stomach trouble. (2) A case of hernia in which Murphy's buttons had been used for intestinal anastamosis. This was a large hernia in a lady sixty-five years of age. She had vomited for seven days, and died of exhaustion. (3) Fibroid tumor of the uterus. Patient had had a great deal of treatment by so-called specialists, who had used electricity and other means. She made an uninterrupted recovery until the tenth day, when symptoms of intestinal obstruction supervened. This was finally relieved by the bursting of an abscess. Her recovery finally was good.

DISCUSSION OF PAPERS.

Dr. C. B. Burr, of Pontiac, read a paper entitled, "Some Mental Symptoms of More or Less Interest: A Medical Medley."

Dr. J. E. Emerson: The chief value of the Doctor's paper is that it gives us an idea of the varied forms which insanity may assume. The legal profession and the laity have the opinion that insanity follows a fixed and firm rule from which there is no deviation. This, any expert upon insanity knows, is not the case. Dr. Burr's first case I will class under the broad mantle of hysteria, and as a parallel to it I wish to recite the following case: A boy who in one year at school was very bright, and at the head of his class, in the next, became dull, morose, and indifferent, complaining of many vague symptoms of disease, falling down at times, but never hurting himself, always letting it occur at a time when he could expect to excite sympathy from those around him, especially in his lady friends. This I would class as a case of hysteria. Hysteria and insanity may gradually verge into one another. Is premeditation an evidence of insanity? It is not so considered by the law, but my own observation has led me to believe that insane people frequently exhibit cunning and deliberation, and often premeditation. The insane have desires, emotions, and plans to carry out, in the same manner as the sane; the machinery is out of order but it is not stopped. They have purposes, and have the astuteness to carry them out, but they cannot be depended upon to always act in a natural manner. The question is not, Is the act premeditated? but, Is the mind normal?

Dr. Theo. A. McGraw: What weight does Dr. Burr attach to non-symmetrical heads?

Dr. C. W. Hitchcock: I recognize the first case, and should class it as hysteria. There are different kinds of hysteria. This case is not a purely hysterical one. It was a case of malingering, one with mental impairment. These two cases suggest that examination of the patient for confinement in an asylum should be more carefully done than at present, and a certificate should be more carefully made out. The first change of mental activity marking these cases is very vague; perhaps our natural depravity accounts for the natural swear words.

Dr. W. P. Manton: The general practitioner should make himself very familiar with these cases of malingering. Every case should be examined by an expert before being committed to an asylum.

Dr. Hoyt: An expert should be very careful as to the testimony he gives because it is upon what he says that the liberty of the patient depends. I believe that the law should commit a criminal who has been adjudged insane to an asylum for a period equal to that which would be covered by his sentence were he sane and committed to jail. This would prevent crime.

Dr. J. B. Newman: It is very important to define and diagnose cerebro-spinal phenomena, both sane and insane. The first case I would look upon as showing evidence of cortical irritation. The patient may be sane upon one subject and insane upon another.

Dr. Longyear: In the first case this obstinancy of mind might have been produced by the act of masturbation. Also in Dr. Emerson's case,—I would like to ask him if he did not think it so?

Dr. Emerson: Dr. McGraw may rest easy on the score of a symmetry. While there is no question but that the typical head is symmetrical, there are wide variations.

Dr. Burr: The plea of insanity in criminal cases is not so popular as it used to be. The cunning and premeditation of homicides who are insane is a well-established fact. The feigning of epilepsy is well known. Unsymmetrical and large heads do not necessarily indicate anything, although a disproportion between cranial and facial development may mean something. In aphasia the singing of old songs is easily accounted for, but the acquirement of new songs is doubtful and not easily accounted for. I do not think that a patient can be insane upon one point and sane on another. Pathology does not hold out this view. Masturbation did, I think, have something to do with the first case reported in my paper. There might have been some cortical irritation.

REPORTS OF CASES.

Dr. Chas. T. Southworth, of Monroe, reported the following case: On November 5, 1892, I was called to see B. B., a German, aged thirteen years, and received the following history: Patient was taken sick in August, with chills and fever, and had consulted Dr. Knapp, who pronounced her case one of malarial fever. The fever lasted four days, but patient continued to grow weaker and weaker, and nothing that Dr. Knapp could do gave her any relief from the severe headache from which she suffered continuously. She was able to be around until October 10, when she took to her bed and has been there ever since. Examinations which I made brought forth the following symptoms: Temperature, 99°; respiration, 24; pulse, 100, regular and strong. Patient quite weak, but body well nourished. Skin and conjunctivæ very yellow. Tongue very heavily coated and very dry; complained of great thirst. Urine scanty and very highly colored; odor, normal. Bowels very constipated, and stools of a clay color and tarry consistence. Complained of very sharp pain in right side over lower border of liver; also of very acute pain in head, both frontal and occipital. Vomiting —almost daily—of a shiny character, and dark green in color. Was unable to distinguish objects, and had been so for about five days. Pupils somewhat dilated, but clear. Appetite good—in fact, rather craving—and very little of the food taken was vomited. She also suffered from pains shooting through the eyeball. At this time she had had three unconscious spells, lasting several hours, and being just four days apart. Palpation and percussion of abdomen revealed nothing abnormal, excepting little tenderness over lower border of liver. My diagnosis was obstruction of liver and gall-bladder, but of what nature I knew not. I immediately put her upon mercurials, with quinine, calomel, and bicarbonate of soda, of each, one-fifth grain; one powder, three times a day, and left tablets of acetanilid compound for the pain in the head. The next day I found that her system would not tolerate the quinine and have repeatedly tried it since, but the stomach will not retain the smallest particle of it. After five days treatment with the calomel and soda the pain in the right side left her, the tongue cleaned off nicely, and the vomiting was some better. Let me say here that with these powders each day I succeeded in getting but one movement of the bowels each day. At this time the pain in the head, instead of getting better, grew worse, and I was obliged to resort to morphine hypodermically in order to get any relief. On November 12, one week from the time I first saw the patient, she had a convulsion. Every muscle in the body was convulsed. This lasted for one-half hour, and the unconsciousness which followed lasted for four hours. One week from that day she had her second convulsion, which lasted one hour, unconsciousness lasting eight hours, and, again, one week later, on same day and at the same hour as first and second (10 A. M.), she had her third convulsion, lasting three-quarters of an hour, and was unconscious for six hours. This regularity of things somewhat astonished me. It will be unnecessary, I think, to follow the treatment all the way through, but I will say that I have found nothing that will give any relief whatever from the headache excepting morphia. During all this time constipation has existed, so much so that suppositories, enemas, and most cathartics have lost all effect, and during the past two weeks there has not been a single movement of the bowels, notwithstanding that I have given almost everything, and this without causing vomiting. At no time has her temperature been above 99°, and most of the time being normal, excepting twice after convulsions, when it was 97.5° and 97.8°. The appetite has continued good, but patient is now very weak and very much emaciated. Voice is very strong, but at no time has she been able to see anything more than to distinguish between daylight and lamplight. I have had Dr. Heath in consultation, and this case has been a very interesting one to both of us, and neither one of us is able to arrive at a satisfactory diagnosis. All we can say is that it is a brain trouble. All treatment has certainly been most unsatisfactory and discouraging.

Dr. J. H. Carstens: This case requires a laparotomy. Make an exploratory operation; there is probably some obstruction to the gall-bladder.

Dr. J. Flintermann: While it would be a simple thing to make a laparotomy, it does not seem as though the symptoms pointed in that direction. They tend rather to suggest cerebral tumor.

Dr. J. B. Newman: This patient may have gastro-intestinal irritation, or multiple neuritis.

Dr. Burr: The symptoms seem to point to some kidney disease. The fact that there are no local paralyses would indicate that there was no tumor.

Dr. J. Flintermann: We do have some forms of glioma which do not produce paralysis.

Dr. Burr: That is true.

Don. M. Campbell, M. D., Secretary.

EDITORIAL ARTICLES.

THE TREATMENT OF DISEASES BY ORGANIC JUICES.

An unexpected aftermath is being gleaned in that field of physiological medicine, in which Brown-Séquard, some three years ago, scattered what then seemed the seeds of wild and unprofitable theorizing. Since that date Brown-Séquard's notion that the extracts of special organs contain the pabulum requisite for the nutrition of homologous organs in the individual, has received a certain amount of clinical confirmation which cannot entirely be ignored. This must lead those to review their judgment who at the time so unreservedly stigmatized the distinguished physiologist's speculations as signs of intellectual decrepitude, at least in so far as the essential physiological principle upon which Brown-Séquard's extravagant claims were based.

Foremost among the results which seem to coincide with the principle enunciated by Brown-Séquard is the obvious amelioration occurring in myxœdema when treated by injections of thyroid juice. A large experience of the method of treatment is being accumulated, and the results attained tend to strengthen belief in its efficacy.

The acquisitions attributable to similar clinical experiments in other fields though less substantial, are not unpromising. Among these nervine, or an extract of nerve-substance, has some clinical data in favor of its administration in epilepsy and other neuroses, while extracts of gray substance and spinal cord find advocates for their use in neurasthenia, insomnia, nervous debility and other conditions of nerve exhaustion. The treatment of diabetes by means of extract of pancreas is also said to be meeting with some success.

The philosophy underlying the application of these remedial measures is probably inadequate to the interpretation of the effects produced. It can be understood that each organ may demand for its sustenance and development a special pabulum, and that in the ordinary way this pabulum is only obtained by the expenditure of a large amount of vital force. The exhausted spine but slowly regains its vigor, even under forced feeding and rest. Once grant that it needs a specific product to induce the required nutritive bias, and it is easily conceivable that this special substance may have been elaborated in the spinal cords of healthy and vigorous animals. The point taken for granted in the hypothesis is that differentiation of function necessarily implies an absolute corresponding difference of nutrition, a position hitherto unconfirmed by therapeutical or clinical experience.

The observations recently recorded by a notable neurologist on the use of organic extracts which have been previously treated by boracic acid to a sterilizing point are noteworthy, though they proceed from an authority from whom the surprising is not unexpected. It would seem that the sterilizing process, must in actual fact be akin to the action of the gastric juice on animal products, an action which nearly every observer and every worker in this particular field insists is fatal to the integrity of the very substance it is the aim of this treatment to impart the organism. The hypodermic syringe is a necessary adjunct to a line of treatment and experiment which relies upon the direct introduction of essential substances into the blood.

EDITORIAL BREVITIES.

THE STATE CARE OF THE INSANE.

The subject of state or county care of the insane is again uppermost in political circles. An effort is to be made in the present legislature to give power to the county of Wayne to provide for its indigent insane. Statements have been issued showing the great saving which would accrue to tax-payers through this arrangement. The cost of keeping the indigent insane in the Wayne county-house is shown to be even less than that of caring for the healthy poor. How can these things be? This in itself ought to be a sufficient argument against the scheme. A conscientious community will not object to paying more for the sick and distressed than for the healthy, and the unfortunates who now find an agreeable refuge in our admirably conducted state institutions are certainly entitled to a full share of public aid.

PAPERS AT MEDICAL MEETINGS.

Now that the state medical societies are arranging their programmes, a few hints as to how to write a paper to be read before the profession will not come amiss. The instructions formulated by Dr. Northrup, of the New York academy of medicine, seem admirable in every way. First, he says, pass over Galen and Hippocrates—they have been dead some time and their opinions are usually obsolete. Scratch out the formal introduction and begin where the subject matter really begins. Condense the body of the paper and end where the subject matter ends. In this way a short, concise and practical paper can be written.

MEDICINE AND POLITICS.

THE New York academy of medicine barely escaped passing a resolution whereby the interference or even the coöperation of the academy would have been interdicted in any forthcoming quarantine regulation. The reason for this seemed to be in the political rankerings the discussion of such subjects engendered. The profession of New York could hardly, however, allow themselves to be prevented an expression of opinion upon important public questions, on account of the differences which the discussion of such questions arouse. The academy has always been a powerful factor in promoting humane and beneficent measures, and will, it is trusted, not shirk its responsibilities for the sake of preserving ineffectual harmony.

THE PAN-AMERICAN MEDICAL CONGRESS.

THE preparations for the Pan-American congress continue to be prosecuted with great vigor on the part of its energetic officers. The gathering will take place in Washington in the first week of September, next. The International medical congress will meet in Rome in the latter part of the same month; many of the visitors to Washington will probably continue their peregrinations to the Holy City. The financial management of a congress is always a matter of responsibility, and members will lessen the labors of the committee of arrangements by sending the registration fee of ten dollars in advance to the treasurer, Dr. A. M. Owen, Evansville, Indiana.

MEDICAL NEWS.

LISBON will have a Pasteur institute.

THE French dermatologist, Hardy, is dead.

INFLUENZA is slightly prevalent in eastern cities.

THE Minnesota legislature will have to do with an anti-hoop-skirt bill.

DENVER has thirty-three ophthalmologists, and other specialists in proportion.

PROFESSOR VON ESMARCH celebrated his seventieth birthday on January 9, 1893.

THERE are ten physicians in the Missouri house of representatives and three in the senate.

THE American surgical association will meet in Buffalo, New York, May 30, 31, and June 1, 1893.

THE woman's medical college, of Pennsylvania, has extended its course to four years.

ENGLAND has two hundred and ninety-eight coroners, only one-sixth of whom are medical men.

HOT SPRINGS, Arkansas, has about ninety doctors, about thirty-five of whom are pursuing regular methods.

THE Missouri state medical association will hold its next annual meeting at Sedalia, on May 16, 17 and 18, 1893.

THE Iowa state medical society will hold its forty-second annual session at Burlington, May 17, 18 and 19, 1893.

THE woman's medical journal is the title of a new monthly journal devoted to the interests of women physicians.

A BILL has passed both houses of the New York legislature incorporating the Bayard homœopathic medical college.

THE Nebraska state medical society will hold its next annual meeting at Nebraska City, May 16, 17 and 18, 1893.

THE Ohio state medical society will hold its next annual meeting at Put-in-Bay, June 28, 29 and 30, in the hotel Victory.

THE Northwestern university woman's medical school, is the name recently adopted by the woman's medical college of Chicago.

THERE are on an average about one million seven hundred thousand prescriptions dispensed in Saint Petersburg during the year.

DR. WILLIAM W. DAWSON, of Cincinnati, died on February 16. He was a former president of the American medical association.

THE Cleveland (Ohio) medical society, with a charter list of one hundred and twelve physicians, was organized on February 3, 1893.

THE ARCHIVES OF PEDIATRICS.—Dr. C. G. Jennings, of Detroit, has been appointed an associate-editor of this excellent journal.

DR. D. F. DICKMAN, of Fort Scott, Kansas, president of the Kansas state medical society, and editor of the *Medical Catalogue*, is dead.

THE Imperial public health department of Berlin is to have new buildings erected at a cost of one hundred and seventy thousand dollars.

THE Scandinavian medical society, of Chicago, is endeavoring to bring about a convention of Scandinavian physicians, to be held during the Worlds's fair.

THE language of chickens is being pursued by Dr. Louis Prevot, a French savant, who proposes to give the results of his study to the academie des sciences.

DR. G. W. STONER, who has been transferred from the Marine hospital, of Detroit, to that of Baltimore, was given a dinner by his medical friends on his departure for his new field of labor.

SAINT MARK'S HOSPITAL, GRAND RAPIDS.—The recently issued report of this hospital is an attractive book, and shows the institution to be in a high state of efficiency, and unlike most similar institutions, untramelled by financial incubus.

The Florida medical association will convene its twelfth annnal session at Jacksonville on April 4, 1893.

The Warren triennial prize of five hundred dollars for a treatise on "Rickets," has been awarded to Dr. John Strahan, of Belfast.

Dr. Knapp, of Ottawa, Kansas, for nineteen years superintendent of the Kansas state insane asylum at Osawatomie, died at his home on December 30.

The university of Berlin has four thousand eight hundred and seventy-six students, of whom one thousand two hundred and fifty-four belong to the medical faculty.

A bureau of public baths, under the management of the state board of health, with a three-thousand-dollar superintendent, is the purpose of a bill now pending in the New York legislature.

"An act granting additional quarantine powers and imposing additional duties upon the marine hospital service," has passed both houses of congress and received the signature of the president.

The insane asylum of the Strafford county work-house, in the vicinity of Dover, New Hampshire, was destroyed by fire on February 9, and forty-four of the inmates lost their lives. A pyromaniac caused the fire.

A Correction.—In Dr. Maire's article on "Mastoid Disease," in our last issue, the statement "the mastoid is diseased in about sixty-seven per cent. of all aural cases," should have read "sixty-seven one-hundredths per cent."

The Lebanon hospital, of New York city, was dedicated on the 22d of February. It is a five-story structure, with several smaller buildings, and is located in the vicinity of One-Hundred-and-Fiftieth street and Westchester avenue.

Dr. L. A. Sayre, of New York, has exsected seventy-three hip-joints. A patient on whom he operated several years ago, removing the head of the femur and upper three inches of the shaft, recently won a prize in a skating contest held in Central park.

There were one hundred and twenty-eight new works published on medicine and hygiene in this country during 1892. This is twenty more then were published in 1891. In a graded list of nineteen classes of new books, medicine stands number thirteen.

Organopathy is the name suggested by Dr. John Aulde, of Philadelphia, for that branch of therapeutics which proposes the treatment of disease with an extract or tincture of the organ of a healthy animal corresponding to the organ affected in the human subject.

Infection by Circumcision.—Dr. F. P. Kennicutt reports ten cases in which Jewish boys were circumcised by a tuberculous operator and in which the preputial wounds were all infected by the operator's saliva. Seven died and three recovered with tubercular adenitis.

The Excelsior medical college is the name under which a bogus medical institution existed in a New York city hotel. The charter was obtained in Massachusetts, and a newspaper reporter who attended "lectures" one week and paid fifty dollars, was granted a medical degree.

DR. KATE S. SNYDER, class of 1888, university of Michigan, has been appointed assistant physician at the Southern Indiana hospital for the insane, located at Evansville.

SWITZERLAND has a population of about three millions, and their bodily ailments are administered to by one thousand one hundred and fifty-seven medical practitioners, ten of whom are women.

PHYSICIANS are considered poor business men, but statistics show that ninety-five per cent. of business men fail to manage their own business, while ninety per cent. of physicians succeed in making a living.

FOR the reason that the medical service rendered was not worth so much money, a physician in Philadelphia returned a check for five hundred dollars which had been tendered him by a patient recently.

THE Pennsylvania society for the prevention of tuberculosis held a special public meeting at Philadelphia, January 25. The meeting was called to formulate plans for popularizing the organization, and membership was made eligible to everyone paying an initiation fee of one dollar.

THE north Missouri medical association is the name of a new medical society that had its inception in Brookfield, on December 2, 1892. It is composed of regular physicians of the counties of that state north of the Missouri river. The next meeting will be held at Moberly, April 18 and 19, 1893.

A CONVENTION of military surgeons will be held in Chicago August 8, 9 and 10, under the auspices of the Military surgeons' association. The association projects starting a medical journal for the publication of such papers referring to the soldier and sailor as could not appear in other periodicals.

THE legislature of Ohio has a bill before it whose purpose is the re-organization of the board of trustees of the Cincinnati hospital. It contemplates a board of five members, four of whom shall be appointed by the mayor, and the fifth one to be the mayor himself. Physicians are excluded from acting as trustees.

MEHARRY medical college, the medical department of the Central Tennessee college, located at Nashville, held its seventeenth annual commencement on February 7. Thirty-six students received the degree of doctor of medicine. During the past session of this school there were one hundred and twenty students in medicine.

THE New York state asylum has been supplying its patients with oleomargarine at a saving of two thousand two hundred and fifty-five dollars annually, and to the gratification of those who eat it; all pronounced it better than cheap-grade dairy butter. Now the "farmer's friends" are raising the wind, and want the use of the palatable article suppressed.

THE woman physicians of Detroit have started a free dispensary intended for the benefit of poor patients. The following are interested in the organization: Florence Huson, president; Harriet A. Gerry, secretary and treasurer; Elizabeth L. Deuel, Gertrude Banks, Lucy J. Utter and Helen F. Warner, directors; Emma D. Cook, Flora J. Lorman Cobb, Lulu M. Hudson, Maud Fry, Louise Harvey, Mary Howell Miller, Harriet Foxton, and Isabella Foster.

Dr. Charles Shepard, who recently died at Grand Rapids, left an estate valued at three hundred thousand dollars, the greater portion of which is divided between a widow and two sons. The Union Benevolent Association Home and Hospital, of which the doctor was president, will receive six thousand dollars.

Connecticut is likely to enact a law for the regulation of medical practice. A bill is now pending in the legislature which provides for boards of examiners, each of the three schools being granted its own independent board of five reputable physicians nominated by the state board of health upon the recommendation of the medical societies.

A bill has been presented to the assembly of New York which provides for the abolition of the office of coroner in the city and county of New York, and the transfer of the medical functions of this officer to the jurisdiction of the board of health. This body is empowered to appoint three "inquest physicians" at a salary not to exceed three thousand dollars a year, each. The bill is unconstitutional and will undoubtedly suffer defeat.

The Illinois state senate is entertaining a bill which contemplates a medical examining board for that commonwealth. It will consist of nine regulars, one homœopath, and one eclectic; none of whom shall be connected with a medical college. A fee of twenty dollars at regular examinations, and fifty dollars at special examinations, will be exacted. A fine of not less than ten dollars nor more than two hundred dollars is a provision for violation of the laws.

Nu Sigma Nu.—A banquet of the Alpha and Beta chapters of this confraternity was held in the Russell house, Detroit, on Friday evening, March 17. Dr. Flemming Carrow, of Ann Arbor, acted as toastmaster, and among those who responded to toasts were Dr. F. W. Robbins, Mr. Julian McClymonds, Dr. Victor C. Vaughan, Mr. C. B. Bradford, Dr. P. M. Hickey, Dr. F. W. Mann. The affair was very successful, and the next annual banquet will be looked forward to with pleasure.

The nurses of Paris have organized a union. They were obliged to labor from fifteen to sixteen hours a day for meagre compensation. In the hospitals and asylums of the Seine department about six thousand nurses of different grades find employment, but many others are obliged to seek work among the general public in order to earn a living at their vocation. As a consequence large commissions must be paid to agencies which exist for the purpose of procuring situations. These grievances suggested the formation of the union.

A sanitary convention will be held at Stanton, Michigan, on Thursday and Friday, April 27 and 28. There will be sessions the first day at 2:30 p. m. and 7:30 p. m.; on the second day at 10 a. m., 2:30 p. m. and 7:30 p. m., standard time. At each session of the convention there will be addresses or papers on subjects of general interest pertaining to public health, each paper to be followed by a discussion. Authors of papers are requested to limit them to twenty minutes. The speakers who lead the discussions are to be allowed ten minutes each, all others five minutes. The papers are expected to be original contributions, which, when read, are to be considered the property of the convention, and to be left with the secretary.

THE legislature of Ohio has passed a law requiring an examination before doctors are allowed to practice veterinary surgery. This body refused to consider a bill contemplating the regulation of the practice of medicine among human beings.

THE legislature of Massachusetts made an appropriation of one hundred and fifty thousand dollars in 1889 to erect buildings for the purpose of experimenting on methods of treating inebriates. The buildings are now ready for occupancy, and are located at Foxborn, Boston.

PATENT medicine venders have received a blow in England by a recent decision in the courts. The purchaser of a "carbolic smoke ball," who faithfully used the remedy according to directions, sued for the forfeit of one hundred pounds offered for every case it failed to cure. In spite of all the arguments of the defense the courts awarded the forfeit.

LONDON hospital recorded its first case of symphyseotomy, on February 12, 1893. The operation was performed by Dr. Arthur H. N. Lewars, and was an entire success. This surgical procedure has been elected in England but twice in one hundred and sixteen years. The first operation, which proved fatal to mother and child, was performed by Dr. John Welchman, at Kingston, on September 4, 1782.

THE association of physicians and surgeons of Windsor, Ontario, unanimously adopted the following expression of sentiment at its regular meeting held February 13, 1893: WHEREAS, a number of medical practitioners are endeavoring to secure legislation in a manner subversive to the usefulness of the Ontario medical council, we, who daily contrast the medical legislation of Michigan with the efficient legislation of Ontario, beg to express our entire confidence in our medical council; and we beg to urge that any change in legislation that we may desire should be brought about only through the council, by the representative whom we elect.

THE Cincinnati academy of medicine lately inaugurated a movement which resulted in the union of the several medical societies of that city and a division of the consolidated body into sections. The consummation of this plan has given Cincinnati a medical organization of about two hundred and fifty members. The following officers have been elected: President, Dr. C. G. Comegys; first vice-president, Dr. E. Gustav Zinke; second vice-president, Dr. E. S. Stevens; recording secretary, Dr. David DeBeck; corresponding secretary, Dr. J. C. Oliver; treasurer, Dr. Geo. E. Jones. The erection of a society building is contemplated.

THERE is trouble in the children's hospital at Cincinnati. A new head nurse was recently appointed and the board of lady managers instructed her to keep a watchful eye on the medical staff and report observations to them. In endeavoring to regulate matters to the satisfaction of the lady managers the displeasure of the physicians was incurred, and they very forcibly expressed objection to the new order of things by immediately tendering their resignations, the action to be final unless the head nurse was removed. The board of trustees now appeared upon the scene and declined to accept the resignations of the physicians, but instead, the board of lady managers were notified to accept the resignation of the head nurse.

RECENT PUBLICATIONS.

REVIEWS.

GUIDE TO THE DISSECTION OF THE HUMAN BODY.*

THIS guide to dissection aims to supply the beginner with definite directions as to the manner in which he shall proceed in the dissecting-room. Dividing the time at his disposal into three courses of three weeks, the course he shall pursue each day during the nine weeks is definitely prescribed. The structures he shall examine are briefly described, and the student need never ask himself, "What shall I do next?" The guide is arranged in note-book form and interleaved with blank pages. It will be found a desideratum to students of anatomy.

* A practical guide for beginners to the dissection of the human body. By Irving S. Haynes, Ph. B., M. D., demonstrator of anatomy in the medical department of the university of New York. Price, $1.00. E. B. Treat & Company, New York.

HAND-BOOK OF INSANITY FOR PRACTITIONERS AND STUDENTS.*

A VERY useful manual of insanity is issued by Messrs. Wood, from the pen of Dr. Theodore Kirchhoff, of Kiel. It is divided into two parts. The first deals with the anatomical basis and location of mental disturbances, the classification and mode of action of the causes of insanity, the signs, course and diagnosis of mental disease, the treatment of insanity, and a brief historical review of psychiatria. The second part classifies insanity, and gives separate consideration to the simple mental disorders, melancholia, mania, and paranoia, and the mental disorders associated with permanent anatomical changes in the brain or with general diseases. This portion of the work will be found especially instructive.

The manual is very clearly and concisely written, and affords the general practitioner an admirable opportunity for familiarizing himself with the special studies of the alienist.

* By Dr. Theodore Kirchhoff, physician to the Schleswig insane asylum. Illustrated with eleven plates. William Wood & Company, New York.

ALCOHOLISM AND ITS TREATMENT.*

DR. USHER's book on alcoholism is an exceedingly powerful plea for the consideration of inebriety as a pathological state. The author reviews very carefully the pathological changes induced by alcoholism, and considers the disease in its inherited, acquired and infantile forms. The medico-legal relations of alcoholism are particularly well discussed. A phase of the disease, in which some very startling phenomena are exhibited, is described under the title of alcoholic trance. Much of this will be new to a number of readers. The treatment recommended includes those remedies employed by some of the best known specialists. The book is an admirable compendium of our recent knowledge of this interesting subject.

* By J. E. Usher, M. D., London. G. P. Putnam's Sons, New York.

MEDICAL PROGRESS.

MEDICINE.

PRECAUTIONS AGAINST CHOLERA.

How tenderly, minutely, and wisely the paternal German government advises its children during the present cholera epidemic may be seen from the following rules for avoiding the pestilence, issued by the Imperial bureau of health, which are published in the *Therapeutische Monatshefte*, September, 1892:

(1) Keep your presence of mind in the danger; avoid too great anxiety, for it clouds your clear judgment. Only the man who thinks clearly can make proper use of the precautions against danger.

Maintain cleanliness in your person and surroundings. Discretion, temperance, precise cleanliness, prove the best protection against disease.

Hold firmly to your ordinary regular mode of life. Avoid festivities and assemblages of people.

Avoid medicines as long as you are well.

Visit the sick only when your duty calls you.

Avoid intercourse and close contact with persons who come from cholera regions.

Do not leave your home in order to escape the disease. Consider that you may be in greater danger in traveling, and living under altered conditions in a strange place, than while leading a careful, regular life at home.

(2) Do not put other objects besides food and drink in your mouth,—for example, the fingers in turning through a book, pen-holders, lead-pencils, etc.

Drink as little water as possible, and only such as you know to be above suspicion.

Pure spring-water, is, as a rule, unsuspicious. Water from deep pipe-wells and from closed pipes, if taken from open waters, such as have been subjected to a genuine filtering, is safe. (Small house-filters, unless frequently changed or cleaned, are rather harmful than useful).

Water from rivers, ditches, ponds, flat, open, or poorly covered springs, also from springs which are near dirt or dung sites, is suspicious during cholera epidemics. All washing and rinsing, as well as pouring out of dirty water near springs, may be dangerous to health.

Suspicious water during prevalence of, or near, cholera is only safe to use for drinking, washing the face, rinsing the mouth, washing utensils used for food and drink and the like, after being boiled one minute. The germs of the disease are destroyed by cooking, but fresh germs may again occupy it if it stands long.

To make boiled water taste well, add to each glass (half a pint) as much tartaric acid as you can take on a knife-point, or two drops of hydrochloric acid.

Keep water in clean vessels.

Tea, coffee, and cocoa are permitted drinks, also good beer and pure wine.

Beware of ice and very cold drinks.

Let your beer be clear and fresh, neither sour or insipid; have it served to you in glasses which have been washed with unsuspicious water (when necessary, boiled).

Bitter schnapps often contain aloës, hence act laxatively and are questionable.

Mineral-waters are unquestionable, if they come from natural springs or are prepared with distilled water.

Avoid drinking uncooked milk.

The disease may adhere to butter and fresh cheese, if they were prepared or kept near persons ill with cholera.

Eat fruit and vegetables, also onions and the like, only in a cooked state.

Eat nothing uncooked or unroasted which strange hands have touched, unless you know them to be reliable.

Purchase food only from reliable, clean shops. Avoid such as are in cholera houses.

Avoid all excess in eating and drinking. Be especially cautious if you incline to diarrhœa.

Eat and drink nothing as wholesome which is in a sick-room. Consider that flies and such insects might carry the germs of disease from the patient to your food.

Even cigars may convey infection in a patient's house.

(3) Keep your head cool, your body warm, your feet dry.

Live and sleep in pure air; fumigations do not prevent contagion.

Wash your hands frequently during the day with water, soap, and brush, especially before you touch eatables.

If you have touched any dirty or suspicious objects, first wash your hands carefully with a solution of four teaspoonfuls of water-clear fluid carbolic acid in a quart of water (five per cent. carbolic-acid solution); then wash this off with clean water and soap.

In cholera regions do not bathe in rivers or ponds.

Use a public privy only in case of necessity. The seats of privies which are used by strangers should be cleaned daily with soapy water. For this take one pound of soap to a pail of hot water. If your privy is used by persons suspected of disease, rinse the wall of the funnel with freshly-slaked lime (one part quicklime to four parts water).

(4) The infectious material of cholera is contained in the excretions of the patient. It adheres to soiled linen and clothing, and can be transmitted by anything which touches such objects or excretions, even when this only occurs indirectly and not in a noticeable manner.

Excretions of persons ill with, or suspected of having, cholera, and floors, etc., soiled with them, disinfect by copious (at least hourly) use of slaked lime or chlorinated lime solution (five drachms chlorinated lime to one quart cold water), or other trusted disinfectants.

Linen, clothing, bed-clothing, covers, and the like, also such as come to you from cholera regions, send, well-wrapped up and tied, to a public disinfecting institution.

If such is not within reach, soak the things twenty-four hours in soap and water (one pound washing-soap to a pail of hot water), and then boil thoroughly.

Other soiled objects cleanse thoroughly with soapy water, with quicklime, or carbolic-acid solution. If the nature of the objects does not admit of this, then place them for at least six days in an unused, airy, dry place.

Thorough drying is unfavorable to the development of the disease-germs.

(5) If your digestion is disturbed, if you have diarrhœa, especially with vomiting or great nausea, consult a physician at once.

Until he comes, take a warm drink, put on a woolen bandage about your body, remain in your room; if in great distress, go to bed.

For relief, you may take a cup of tea, with cognac or rum. Let your food be a mucilaginous soup, also zwieback, or stale white bread without butter.

If you have reliable (prepared from a physician's prescription) cholera drops at hand, take from twenty to thirty drops on sugar.

Keep your presence of mind, even if you are ill. Fright and cowardice act unfavorably on body and mind.—*Therapeutic Gazette.*

NATIONAL QUARANTINE.

An Act Granting Additional Quarantine Powers and Imposing Additional Duties Upon the Marine Hospital Service.

Section 1.—That it shall be unlawful for any merchant ship or other vessel from any foreign port or place to enter any port of the United States except in accordance with the provisions of this act and with such rules and regulations of state and municipal health authorities as may be made in pursuance of, or consistent with, this act; and any such vessel which shall enter, or attempt to enter, a port of the United States in violation thereof, shall forfeit to the United States a sum, to be awarded in the discretion of the court, not exceeding five thousand dollars, which shall be a lien upon said vessel, to be recovered by proceedings in the proper district court of the United States. In all such proceedings the United States district attorney for such district shall appear on behalf of the United States; and all such proceedings shall be conducted in accordance with the rules and laws governing cases of seizure of vessels for violation of the revenue laws of the United States.

Section 2.—That any vessel at any foreign port clearing for any port or place in the United States shall be required to obtain from the consul, vice-consul, or other consular officer of the United States at the port of departure, or from the medical officer where such officer has been detailed by the president for that purpose, a bill of health, in duplicate, in the form prescribed by the secretary of the treasury, setting forth the sanitary history and condition of such vessel, and that it has in all respects complied with the rules and regulations in such cases prescribed for securing the best sanitary condition of the said vessel, its cargo, passengers, and crew; and said consular or medical officer is required, before granting such duplicate bill of health, to be satisfied that the matter and things therein stated are true; and for his services in that behalf he shall be entitled to demand and receive such fees as shall by lawful regulation be allowed, to be accounted for as is required in other cases.

The president, in his discretion, is authorized to detail any medical officer of the government to serve in the office of the consul at any foreign port for the purpose of furnishing information and making the inspection and giving the bills of health hereinbefore mentioned. Any vessel clearing and sailing from any such port without such bill of health, and entering any port of the United States, shall forfeit to the United States not more than five thousand dollars, the amount to be determined by the court, which shall be a lien on the same, to be recovered by proceedings in the proper district court of the United States. In all such proceedings the United States district attorney for such district shall appear on behalf of the United States; and all such proceedings shall be conducted in accordance with the rules and laws governing cases of seizure of vessels for violation of the revenue laws of the United States.

SECTION 3.—That the supervising surgeon-general of the marine hospital service shall, immediately after this act takes effect, examine the quarantine regulations of all state and municipal boards of health, and shall, under the direction of the secretary of the treasury, coöperate with and aid state and municipal boards of health in the execution and enforcement of the rules and regulations made by the secretary of the treasury to prevent the introduction of contagious or infectious diseases into the United States from foreign countries, and into one state or territory or the District of Columbia from another state or territory or the District of Columbia; and all rules and regulations made by the secretary of the treasury shall operate uniformly and in no manner discriminate against any port or place; and at such ports and places within the United States as have no quarantine regulations under state or municipal authority, where such regulations are, in the opinion of the secretary of the treasury, necessary to prevent the introduction of contagious or infectious diseases into the United States from foreign countries, or into one state or territory or the District of Columbia from another state or territory or the District of Columbia, and at such ports and places within the United States where quarantine regulations exist under the authority of the state or municipality which, in the opinion of the secretary of the treasury, are not sufficient to prevent the introduction of such diseases into the United States, or into one state or territory or the District of Columbia from another state or territory or the District of Columbia, the secretary of the treasury shall, if in his judgment it is necessary and proper, make such additional rules and regulations as are necessary to prevent the introduction of such diseases into the United States from foreign countries, or into one state or territory or the District of Columbia from another state or territory or the District of Columbia, and when said rules and regulations have been made, they shall be promulgated by the secretary of the treasury and enforced by the sanitary authorities of the state and municipalities, where the state or municipal health authorities will undertake to execute and enforce them; but if the state or municipal authorities shall fail or refuse to enforce said rules and regulations, the president shall execute and enforce the same and adopt such measures as in his judgment shall be necessary to prevent the introduction or spread of such diseases, and may detail or appoint officers for that purpose. The secretary of the treasury shall make such rules and regulations as are necessary to be observed by vessels at the port of departure and on the voyage, where such vessels sail from any foreign port or place to any port or place in the United States, to secure the best sanitary condition of such vessel, her cargo, passengers, and crew; which shall be published and communicated to and enforced by the consular officers of the United States. None of the penalties herein imposed shall attach to any vessel or owner or officer thereof until a copy of this act, with the rules and regulations made in pursuance thereof, has been posted up in the office of the consul or other consular officer of the United States for ten days, in the port from which said vessel sailed; and the certificate of such consul or consular officer over his official signature shall be competent evidence of such posting in any court of the United States.

SECTION 4.—That it shall be the duty of the supervising surgeon-general of the marine hospital service, under the direction of the secretary of the treasury, to perform all the duties in respect to quarantine and quarantine regulations which are provided for by this act, and to obtain information of the sanitary condition of foreign ports and places from which contagious and infectious diseases are or may be imported into the United States, and to this end the consular officer of the United States at such ports and places as shall be designated by the secretary of the treasury shall make to the secretary of the treasury weekly reports of the sanitary condition of the ports and places at which they are respectively stationed, according to such forms as the secretary of the treasury shall prescribe; and the secretary of the treasury shall also obtain, through all sources accessible, including state and municipal sanitary authorities throughout the United States, weekly reports of the sanitary condition of ports and places within the United States, and shall prepare, publish and transmit to collectors of customs and to state and municipal health officers and other sanitarians weekly abstracts of the consular sanitary reports and other pertinent information received by him, and shall also, as far as he may be able, by means of the voluntary coöperation of state and municipal authorities, of public associations, and private persons, procure information relating to the climatic and other conditions affecting the public health, and shall make an annual report of his operations to congress, with such recommendations as he may deem important to the public interests.

SECTION 5.—That the secretary of the treasury shall from time to time issue to the consular officers of the United States and to the medical officers serving at any foreign port, and otherwise make publicly known, the rules and regulations made by him, to be used and complied with by vessels in foreign ports, for securing the best sanitary condition of such vessels, their cargoes, passengers, and crew, before their departure for any port in the United States, and in the course of the voyage; and all such other rules and regulations as shall be observed in the inspection of the same on the arrival thereof at any quarantine station at the port of destination, and for the disinfection and isolation of the same, and the treatment of cargo and persons on board, so as to prevent the introduction of cholera, yellow fever, or other contagious or infectious diseases; and it shall not be lawful for any vessel to enter said port to discharge its cargo, or land its passengers, except upon a certificate of the health officer at such quarantine station certifying that said rules and regulations have in all respects been observed and complied with, as well on his part as on the part of the said vessel and its master, in respect to the same and to its cargo, passengers, and crew; and the master of every such vessel shall produce and deliver to the collector of customs at said port of entry, together with the other papers of the vessel, the said bills of health required to be obtained at the port of departure and the certificate herein required to be obtained from the health officer at the port of entry; and that the bills of health herein prescribed shall be considered as part of the ship's papers, and when duly certified to by the proper consular or other officer of the United States, over his official signature and seal, shall be accepted as evidence of the statements therein contained in any court of the United States.

SECTION 6.—That on the arrival of an infected vessel at any port not provided with proper facilities for treatment of the same, the secretary of the treasury may remand said vessel, at its own expense, to the nearest national or other quarantine station, where accommodations and appliances are provided for the necessary disinfection and treatment of the vessel, passengers, and cargo; and after treatment of any infected vessel at a national quarantine station, and after certificate shall have been given by the United States quarantine officer at said station that the vessel, cargo, and passengers are each and all free from infectious disease, or danger of conveying the same, said vessel shall be admitted to entry to any port of the United States named within the certificate. But at any ports where sufficient quarantine provision has been made by state or local authorities, the secretary of the treasury may direct vessels bound for said ports to undergo quarantine at said state or local station.

SECTION 7.—That whenever it shall be shown to the satisfaction of the president that by reason of the existence of cholera or other infectious or contagious diseases in a foreign country there is serious danger of the introduction of the same into the United States, and that notwithstanding the quarantine defense this danger is so increased by the introduction of persons or property from such country that a suspension of the right to introduce the same is demanded in the interest of the public health, the president shall have power to prohibit, in whole or in part, the introduction of persons and property from such countries or places as he shall designate and for such period of time as he may deem necessary.

SECTION 8.—That whenever the proper authorities of a state shall surrender to the United States the use of the buildings and disinfecting apparatus at a state quarantine station, the secretary of the treasury shall be authorized to receive them and to pay a reasonable compensation to the state for their use, if, in his opinion, they are necessary to the United States.

SECTION 9.—That the act entitled an " Act to prevent the introduction of infectious or contagious diseases into the United States, and to establish a national board of health," approved March 3, 1879, be and the same is hereby, repealed. And the secretary of the treasury is directed to obtain possession of any property, furniture, books, paper, or records belonging to the United States which are not in the possession of an officer of the United States under the treasury department, which were formerly in the use of the national board of health or any officer or any employe thereof.

Passed the House of Representatives, January 21, 1893.

Attest: JAMES KERR, *Clerk.*

SURGERY.

MODERN ANTISEPTIC METHODS.

INFECTION from the air is not now feared; instruments and dressings may be absolutely sterilized, so that the sources of danger have been narrowed down to the hands of the operator and the skin of the patient. The subject of how to render the skin free from germs has, of late, received considerable attention. As yet no method has been discovered that will accomplish this object. Numerous varieties of harmless, as well as pyogenic, germs, are found in the glands and in the deeper layers of the skin, which remains after all forms of disinfection. Notwithstanding this, the skin can be so cleansed as to leave little to be feared from this source. Improvement is still to be hoped for, however, in this direction. The use of heat, either dry or in the form of steam or boiling water, is a manifest improvement over corrosive chemicals in the sterilization of instruments and dressings. The sources of infection being known, therefore, to be the skin of the patient or the hands of the operator, the practical lesson to be deduced is to keep the hands from contact with the wound as far as possible. It is desirable to keep the wound dry, and when every precaution is used to have each article sterile that touches the field of operation, the copious floodings with antiseptic solutions, become unnecessary, and in fact objectionable. As a result of improved technique, wounds are drained much less frequently than formerly. There is equal necessity now to drain infected wounds that heretofore existed, but when an asceptic operation has been performed through healthy tissue, drainage serves no other purpose than to delay the healing of the wound, and perhaps, convey infection; particularly is drainage useless when the wound cavity can be obliterated, either by deep stitches or by pressure applied over the dressings. It is important in these cases to keep the wound dry between the time the operation is completed and the dressings applied. For this purpose the wound may be packed with antiseptic gauze or sponges, and pressure made by the assistant during the introduction of the sutures, which are to be rapidly tied down after the packing is removed, the pressure being maintained until the dressing is complete. The collection in the wound of blood and serum is thus prevented, which, if present, not only prevents primary union, but offers the most favorable soil for the growth of germs, if any have gained admission to the wound. If any proof of the inutility of constant drainage is needed, the experiences of abdominal and pelvic surgeons abundantly suffice. A most noticeable fact is the now infrequent use of the drainage-tube by these specialists. At present the following may be considered the best practice: the most perfect disinfection possible of the skin of the patient and hands of the operator, perfect sterilization of instruments, dressings, ligatures, and sutures, preferably by a suitable form of heat, the avoidance of strong germicides after the skin is opened, keeping the wound as dry as possible, avoiding unnecessary drainage, and the securing of perfect skin apposition.—*University Medical Magazine.*

TREATMENT OF WOUNDS OF THE INTESTINE.

Dr. Chaput condemns in a most unqualified manner, the expectant treatment of wounds of the intestine, the mortality of which is from fifty to sixty per cent. The hitherto unpromising results obtained by laparotomy are attributed to either a late application of this procedure, the overlooking of perforations or imperfect suturing. In dogs, invariable success followed his efforts, in the repair of wounds artificially produced, by means of laparotomy.

Senn's method of ascertaining whether or not perforation exists by forcing hydrogen gas into the bowel through the anus and identifying the presence of the latter at the abdominal wound by lighting it as it escapes, is rejected by Chaput on the ground that considerable force is necessary to drive the gas beyond the ileo-cæcal valve, and when this is accomplished the sudden influx of the gas from the distended colon will convert incomplete perforations in perforating wounds, or separate commencing adhesions. Exploratory laparotomy is preferred to Senn's diagnostic method, each portion of intestine being carefully and systematically gone over, from the ileo-cæcal valve to the duodenum; the stomach and larger intestine being examined last. Each perforation is grasped by means of clamp forceps as soon as it is discovered; suturing of all the perforations is done afterwards.

In cleaning the peritoneum dry sterilized sponges are used, and all antiseptic fluids dispensed with.

In case of excessive hæmorrhage, Chaput follows Senn's proposal and makes digital compression of the aorta until the bleeding points are identified and secured.

In closing intestinal wounds amounting to more than one-fourth of the circumference of the bowel Chaput recommends his methods of transplantation of intestine ("greffe intestinal"). This consists essentially in closing the perforation with a healthy loop of intestine. For this purpose a point in the intestinal track is selected fifteen to twenty centimetres above or below the perforation, bringing this in contact with the wounded intestine and securing the two together by a double row of sutures. In case of double perforation a double transplantation may be employed and resection of the injured bowel be avoided. Should two perforations occur close beside each other it is better to form one large opening by removing the portion lying between the openings, and transplant as before.

The method of transplantation here suggested is based upon an experimental study in eighteen animals. In all eighteen cases the transplantation was successful.—*Gaz. dez Hôpitaux.*—*Annals of Surgery.*

MEDICAL MELANGE.

An admirable remedy in the treatment of colds is the following:

℞ Salol,
Antikamnia,
Sulph. Quinia,
Terpin. Hydrate, . . . āā gr. xxiv (24).

M. ft. capsules twelve. One every four hours. This seems to be a large quantity, but if put in ten-grain capsules it can be taken readily, and is usually very well borne by the digestive organs.

Pommery and the Rabbits.—Some years ago Madame Pommery, whose name is so familiar to epicures, began to utilize some waste land over her champagne cellars, for the breeding of rabbits destined to serve as food for the powder expended by her guests during the shooting season. Madame Pommery was evidently unacquainted with the rabbit scourge that has proved so detrimental to agricultural operations in Australia, or she would never have made such a hazardous experiment. Finding that the rodents above ground were fast becoming more numerous than the bottles in the cellar beneath, and that their burrowing threatened the stability of the said cellars, she consulted M. Pasteur. That magician, by sowing chicken-cholera broadcast among the obnoxious animals, succeeded in killing them all in a fortnight.

CASTRATION FOR MELANCHOLIA.—The operation of castrating males for nervous and mental disorders is at last put upon a firm clinical basis. Oöphorectomy came from the south, and thence diffused its genial and unsexualizing influence over the east and north, but testectomy, if we may coin a word on so great an occasion, comes from the west. It was in 1891 that the eastern Michigan asylum published an annual report containing the history of a case in which the operation of castration was done for the relief of a "sickening neuralgia" of the testicles. The patient had not only neuralgia, but melancholia. One of the testicles was removed, and the testicle was found diseased, but not, as we understand the description, cystic or suppurating. The patient improved, but was not cured, and so, later, the second testicle was removed. The medical superintendent, Dr. Burr, now reports that the cure is complete. It is interesting to notice that both testicles had to be removed, just as, in the opposite sex, we are told that both ovaries ought to go in order to get the best results. Here we have a case of chronic neuralgia and melancholia, in a man of fifty-seven, cured by castration. Neuralgia is very common, and so is depression of spirits. There is a fruitful field, therefore, in which ambitious andrologists may work. Shall we not soon begin to get reports of "my second series of one thousand castrations, with hints on technique?"—*Medical Record.*

THIOL: ANTISEPTIC REDUCING AGENT.—Thiol is a synthetical product recently introduced (Washington Dodge, M. D., in *Pacific Medical Journal*) which closely resembles ichthyol, both in its chemical composition and therapeutic properties, but is free from some of the objectionable features of the latter. It has not the unpleasant odor of ichthyol and does not stain linen; it is also free from irritant effects which ichthyol often manifests. The usual form is a dark liquid, containing forty per cent. of the base; but it can be obtained pure in scales or powder. Being regarded as a purified ichthyol, it has been used in all the affections in which ichthyol has been found beneficial, and, as a rule, with equally good if not better results. Professor Schweninger, after a thorough trial of the remedy in his clinic in Berlin, regards it as superior to ichthyol. It has marked effects in causing the absorption of pelvic exudates. Large inflammatory masses and adhesions may be often removed in a few weeks. It is well applied on tampons in five per cent. solution in glycerin, renewed every second or third day, and it is well to administer it internally at the same time. Erosions of the cervix are also very promptly healed by this treatment. Used, as it occasionally is, in very strong solution, fifty per cent. or over, it acts much as tincture of iodine, causing a sensation of burning, with loss of the epithelium. In endometritis, which resists the usual modes of treatment, a speedy cure is often effected by applications of pure thiol made weekly. While recommended in many skin diseases, there is one affection in which this remedy acts remarkably well, and that is in facial erysipelas. Used with lanoline in the strength of fifteen to twenty-five per cent., it will effect a cure often in two days, and rarely has to be used over four or five. This ointment should be spread on cloths and kept constantly applied. In burns, frost-bites, and chilblains a ten to twenty per cent. thiol-lanoline ointment is an effective application. For external applications the dry powder is often used, being incorporated with oxide of zinc or with bismuth, in the proportion of five to ten per cent.

THERAPEUTICS OF TRIONAL.—This hypnotic (one of the sulfone series), has lately been the subject of renewed interest on account of its special value in certain cases in which hypnosis or sedation has not been so well produced by some of the other drugs employed in insomnia and the neuroses. The reports speak favorably of it as having a prompt and reliable action; for instance, in the forms of insomnia determined by neurasthenia, functional psychosis and organic brain lesions. The usual dose is fifteen to thirty grains, although single doses of forty-five to sixty grains, and daily quantities of ninety to one hundred and twenty grains, may be given with impunity. The effect of trional is said (*Deutsche Medicinische Wochenschrift*, Number CCCXXI) to be increased by giving it on alternate days with sulfonal. Boettiger (*Berliner Klinische Wochenschrift*) states that trional is especially useful in the insomnia observed in cases of slight psychical excitement and mental disturbances of a primary or secondary character. He gave fifteen to thirty grains at bedtime. In conditions of marked excitement he often gave it in fifteen-grain doses several times during the day.

THE VALUE OF ARISTOL IN CATARRHAL AFFECTIONS.—During the final days of winter and the early weeks of spring when catarrhal affections of the respiratory passages are an equal source of worry to physician and patient, aristol does excellent work. Dr. Porteous writes (*American Therapist*):—"Aristol in post-nasal catarrh and hay-fever has acted well in my hands. After thoroughly douching the nasal and post-nasal passages, also the pharynx, with some antiseptic lotion, I apply to all available parts the powder. In no cases have I seen failure." Aristol has been equally successful in catarrhal maladies of the ear, even after the lesion has progressed into the most unsatisfactory morbid conditions. Dr. W. Byrd Scudder writes (*Eclectic Medical Journal*, 1893):—"In a supperating middle ear where most of the membrana tympani has sloughed away, aristol may be blown in to perfectly coat all unhealthy tissue. I used it in a case of necrosis of the bones of the canal with excellent results." Dr. R. H. Gibbons recommends aristol (*Times and Register*, December 10, 1892) in a great variety of conditions calling for surgical treatment. He adds:—"I have resorted to the use of aristol in the dressing of surfaces in the cavities of the body, those of the ear, the nose, the vagina, and the rectum." His results, he writes, "have been satisfactory to an extreme degree."

PIPERAZIN.—Drs. Biesenthal and Schmidt review (from the *Berliner Klinische Wochenschrift* in *Therapeutic Gazette*) the clinical reports on piperazin which have appeared recently. The reports of Vogt, Ebstein, Heubach, Krakauer and Brik, all based on the use of Schering's piperazin, are all very favorable. Testimony seems to be nearly unanimous that the remedy is harmless, and that it is effective as a solvent of uric acid. Biesenthal and Schmidt report seven cases in which the remedy has been tried. Four of the cases are given in detail. In three of the latter, who were gouty patients, and had attacks of gout, marked relief was obtained. The fourth patient had violent attacks of renal colic. On the first day the piperazin was used an extraordinary quantity of gravel was passed. After the second dose, on the next day, large quantities of gravel were passed several times, and almost immediate relief was experienced. Similar results were obtained in other cases. Biesenthal and Schmidt recommend the remedy very highly. Internally, they say, piperazin is best given in dilute solution in doses of fifteen grains distributed during the day. Its taste is very slight. As it is not irritating to mucous membranes, a one or two per cent. solution may be employed in washing out the bladder in the case of vesical calculi. Hypodermic injections into gouty deposits and local applications to gouty swellings may also be employed.

COMMERCIAL MEMORANDA.

THE BEST ANTIPYRETIC IN TYPHOID FEVER.—"While treating a severe case of typhoid fever," says Dr. J. W. Parrish, of Shelbyville, Indiana, "I resolved to give the new therapeutic agent—antipuralgos—a fair trial. My patient, a lady, had been suffering with a low form of fever for three or four days. The pulse ran up to 115 beats, and the temperature to 104° Fahrenheit, becoming higher in the evening and lower towards morning, with marked tenderness in the iliac region and severe diarrhœa. I prescribed antipuralgos in six grain doses to be repeated every three hours, day and night, until the temperature showed marked evidences of a permanent decline. At my visit on the fourth day I found the temperature 102½°, pulse 98, and learned that the patient had rested well during each night since the remedy had been used. I then directed the treatment with antipuralgos to be continued, and at my visit on the fifth day the temperature had been reduced to 101°, with the pulse at 92, and I ordered the remedy discontinued. This case had spinal curvature and some chronic lung trouble, and was a bad case to act fairly on an antipyretic agent, but I determined to try it and to my amazement no depressing effect resulted from its use, and in this respect antipuralgos differs from all other coal tar preparations that I have tried.

COMPOSITION OF SYRUP OF FIGS.—Because the California fig syrup company thought best to name their laxative compound the "syrup of figs" it does not follow that the active principle of the preparation is made from the fig. Instead of this being the case they state freely to the profession that the laxative properties of the syrup are obtained from senna. Hare states in his new work on therapeutics that both Rutherford and Vignal assert that senna acts very materially in increasing the flow of bile. Hess says that the drug acts directly as a stimulant upon the mucous membrane and so produces a local peristalsis as it is moved along. Hare recommends it especially in the treatment of the constipation of pregnancy. As an ingredient in the compound licorice powder it is one of the oldest and best known drugs. Recognizing the sterling worth of this drug when employed in laxative doses the California fig syrup company has so combined it with other agents that it is both pleasant and effective. It might be called a family laxative, useful in all those cases where a freer action of the bowels is desired. The physician is often puzzled to know exactly what to prescribe when the only remedy indicated is something to increase peristalic action. The therapeutics of senna warrants its recognition at once, while the palatableness of the preparation points to fig syrup as the best medium by which this drug can be administered. It is interesting to note in this connection that the California fig syrup company has just received a decision from the United States court of appeals, confirming their right to the exclusive use of the name "syrup of figs" or "fig syrup" when applied to a laxative medicine.

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

THE NATURE OF FEVER, WITH SOME REMARKS ON THE MANAGEMENT OF SOME FEBRILE DISEASES.*

BY T. K. HOLMES, M. D., CHATHAM, ONTARIO.

THROUGH your courtesy I am permitted to present some thoughts on a subject that must have engaged the attention of all whom I have the honor to address, and which is at the present time monopolizing the skill of many of the wisest and best trained minds in the world. I have thought the subject a suitable one for discussion here because its elucidation has a practical bearing on a vast number of ailments that come under daily observation, and the successful management of which determines largely the claims of the medical profession to the beneficent regard of society. I refer to those disturbances of function which are characterized by elevation of temperature, by altered nutrition, and usually by disturbances of circulation, secretion, respiration and digestion, as well as by disorder of the nervous and muscular systems. I shall, after inviting attention to some of the conclusions arrived at by recent investigations in reference to the cause and nature of the febrile state, refer to some clinical facts that have engaged my attention, and that have a practical bearing on the management of febrile diseases, and I shall finally point out what has been a most effectual aid in treating those diseases in which elevated temperature constitutes a prominent and dangerous symptom. The maintenance of the body at a uniform temperature under the varying conditions of life indicates a perfection in the mechanism that accomplishes it that we may readily believe to be unparalleled, and the means of its accomplishment are so various and so obscure that the secrets of the process are only being yielded up slowly, and are yet but imperfectly understood.

As fever is a disordered state of those processes by which a normal temperature is maintained, its nature will be better understood by first inquiring into these processes. We know that heat is constantly escaping from the surface of the body by radiation, correlation, and by the process of, evaporation, and that heat is also used in warming and moistening the air that is exhaled from the lungs. To compensate for this loss heat must be, and is constantly, generated within the organism. If the heat-production and the heat-loss were equal and uniform, the nearly unvarying temperature of health would be maintained, but no argument is needed to show that these are not uniform. The variations in the temperature and humidity of the air would alone be sufficient to cause wide variations in heat-loss, and there are other factors that determine this to a considerable degree. By some means, therefore, there must be generated in the body, heat equal in the aggregate to that discharged from it, and as the latter is inconstant, so must the former be inconstant. "The maintenance of a uniform body-heat under these conditions implies some mechanism by which these are brought into harmony, and the mechanism which does this must be in intimate relation with heat-production on the one hand and heat-loss on the other, so that the smallest variation in either process will call into operation thermal tendencies whose resultant is back toward the normal."—MACALISTER. Increased discharge of heat must be promptly compensated by increased production, and increased production must be immediately relieved by increased loss. The promptness with which this regulation is accomplished, the extent of tissue affected by thermal variations and the sensitiveness of the mechanism that accomplishes it, easily lead to the conclusion that this regulation apparatus is nervous, and enough has already been ascertained by observation and experiment to confirm this view. It will therefore be seen that the phenomena involved in a study of this question, are heat-production, heat-loss, and heat-regulation, or as MACALISTER designates the process, thermogenesis, thermolysis and thermotaxis.

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*Read at a stated meeting of the DETROIT MEDICAL AND LIBRARY ASSOCIATION, and published exclusively in The Physician and Surgeon.

A solution of these three processes would be a solution of the question of the maintenance of uniform normal temperature, and a solution of the cause and mode of disorder of any, or of all, of them would be a solution of the phenomena of fever. MACALISTER, to whom much is due of what is here stated, has had able co-workers in LEIBERMEISTER, GASKELL, MEADE SMITH, TRAUBE, ORD, WELCH, WOOD, SANDERSON and others, and their labors have dispelled much of the darkness that has always surrounded these questions, although there are nooks in which, as yet, scarcely more than dim twilight prevails.

It would be tedious to pursue the steps that have led up to a clearer and more accurate knowledge of this subject; indeed, it would be impossible to do so in so short a paper as this is intended to be, or to go over the untenable ground that has been occupied and abandoned; suffice it to present those deductions and conclusions that seem to offer the most satisfactory explanation of the phenomena of fever.

DR. MACLAGAN, in an essay written in 1887, maintains that the source of heat in the body is due entirely to retrograde metamorphosis of tissue, and that heat so produced is a waste product and is eliminated just as urea and carbonic acid are waste products and are eliminated. In health the equilibrium is maintained between production and elimination of heat and the temperature is stable; in fever this equilibrium is destroyed, and the temperature rises. He contends that hyperpyrexia is distinct in its origin from ordinary pyrexia; that while the combustion theory will account for the latter the former requires the introduction of a nervous element to produce it. He believes that the thermic centre, which WOOD has shown to be in the upper part of the medulla and which exerts an inhibitory influence on heat-production, may become paralyzed, and that when it does, there being no restraint on the thermogenic mechanism, there is no limit to which the temperature may rise and hyperpyrexia results. It is difficult to accept a theory which accounts for ordinary pyrexia by metabolism alone, and for hyperpyrexia by the introduction of a nervous element whose influence only then comes into operation.

The experiments of MEADE SMITH, and of MACALISTER show that "when a muscle is artificially stimulated, two processes are set up in it,—one, as it were, explosive and manifested by a change of form, and the performance of mechanical work; the other more continuous and manifested by increased development of heat." These two functions seem to be independent of each other, for, by repeated stimulation one may become exhausted, while the other is little, if at all impaired. Heat will cease being generated for a considerable time before stimulation fails to cause a contraction. MACALISTER also found that when the temperature of the whole animal was reduced by exposure in a cold medium the thermogenic function of a muscle so cooled was greatly lessened or completely abolished, while the contractile function was little, if at all impaired. This fact has an important bearing on the treatment of the febrile state as will be pointed out hereafter.

It has long been known that the circulatory and respiratory systems are enervated by two kinds of nerve filaments, whose functions are of an opposite character, the one being motor and the other inhibitory, and it is admitted that their nervous mechanisms are the ones that control heat-loss. It is also known that the uterus undergoes rhythmical contractions during the whole time of gestation and it is claimed by some that it does so at all other times; that the bladder acts in a similar manner in expelling the urine, that the muscles of the scrotum and of the intestines present similar phenomena, and that the lymph channels are under the control of rhythmic nervous influence. Reasoning from analogy we may assume that "all muscular tissue is enervated by motor and inhibitory nerves, the one set catabolic and presiding over disintegrative changes in the muscles which are manifested first by thermogenesis and second by contraction; the other set, anabolic and setting up reconstructive changes in the muscles which are manifested by inhibition of motion on the one hand, and by the absorption of energy on the other." If these views be accepted, and if all muscular tissue is supplied by motor and inhibitory nerves which produce rhythmical contraction during the whole term of life, it will be easy in the light of MACALISTER's experiments on living muscle to account for a large share of the normal body-heat generated in the muscular system. He affirms that no less than four-fifths of all normal heat is produced in the muscles, the other fifth being chiefly generated in glandular tissue and in the digestive process, and he further affirms that heat is constantly generated in the muscles independent of their contraction, although the latter increases it. The various forms of pyrexia may be explained on the system of thermogenesis, thermolysis and thermotaxis, by reference to the predominance of each of these processes. If thermogenesis be in excess while there is not a corresponding increase in thermolysis the temperature must rise;

if thermogenesis be normal and thermolysis from any cause be inadequate the temperature must also rise. If the cause disturbing the harmony between thermogenesis and thermolysis be so potent that compensation is no longer possible, fatal hyperpyrexia results. The agent that deranges any or all of these processes may be anything acting directly on the nervous centres that control them, or indirectly on them through the blood. We know of a great variety of poisons that act in the latter way notably, such as have been found in the eruptive fevers and in malarial fever.

Clinical observation of fever constantly impels one to seek an explanation of its manifestations and it is more with the view of receiving than of imparting information that I mention some difficulties that have perplexed me. Every physician is familiar with the influence of fever on the respiration, especially in children. Sixty, eighty, and even ninety respirations a minute are not uncommon in children under a year old, when suffering from a temperature of 104° or 105° Fahrenheit, and this when the respiratory organs are free from disease. It cannot be due directly to the poison causing the fever, because a rapid reduction of the temperature by means of the cold bath promptly reduces the respirations often to the normal rate, and yet the cause of the rise of temperature is not removed by the bath. Doubtless the rapid breathing promotes heat-loss, and is in this way conservative. Obstetricians are familiar with the beneficial influence of hot water in the resuscitation of the new-born. Immersion of the child in a hot bath excites, the heart very quickly to stronger and more frequent contractions, and I know of a skillful physician who never administers an anæsthetic without having hot water at hand to apply over the heart, should danger threaten from asthenia, and he assures me that he has seen death averted on more than one occasion by this means.

Lauder Brunton pointed out many years ago what I have repeatedly verified, that the heart of a turtle or a frog, when removed from the body will have its beat quickened and slowed by exposure alternately to heat and cold. These observations indicate a stimulating effect of heat on the cardiac sympathetic. Is it not fair to assume that the hot blood of a fevered child acts in a similar way on the motor nerves of respiration, and that blood cooled by the cold bath inhibits the heart and the respiration through its action on the vagus? The conservative action of the cold bath on the heart of a fevered patient becomes evident in view of this inhibitive power, because, as Gaskell has pointed out, anabolism proceeds during the interval between muscular contractions, and when these are normally slow, or nearly so, nutrition of muscular tissue can be more perfectly maintained than when the period of relaxation is short. In a paper published in the "Transactions of the International Medical Congress" at Philadelphia in 1876, I pointed out that a rise of temperature from whatever cause in a child is frequently accompanied by eclamptic attacks, that so long as the temperature remains at or above the point at which the eclamptic seizures came on the convulsions are liable to continue, and that reduction of the temperature to about the normal invariably arrests the convulsions. So far as I know this plan of treating convulsions accompanying fever was new, and I was led to adopt the cold bath treatment of such cases by the experiments of Brunton, above referred to. It appeared not unlikely that the same agent which acted on the turtle's heart in a manner quite opposite to that of heat, would, by reducing the temperature of the general circulation, and through it the temperature of every tissue in the body, counteract the stimulating effect of the hot blood on the nervous centres and arrest the convulsions. The correctness of this supposition was fully sustained by subsequent experience, so that I have come to regard the cold bath as an absolute specific for convulsions coming on during a febrile attack.

About five years ago I had occasion to induce labor at the eighth month for threatened eclampsia. All went well until about half an hour after the birth of the child, the temperature then being normal and the pulse 75, when a violent convulsion occurred. Within ten minutes the pulse rose to 140, and the temperature to 104° Fahrenheit. There was no subsequent convulsion and in less than two hours the pulse and temperature became normal and continued so during convalescence, which was uninterrupted. Zinke, in the *American Journal of Obstetrics* for January, 1893, relates a somewhat similar case. The patient, at the time of the first convulsion, had a pulse of 80 and a normal temperature, There were four subsequent convulsions about two hours apart, the temperature rising higher after each fit until the last when it registered 109.4° Fahrenheit. I have usually observed a marked rise of temperature after a puerperal convulsion and am unprepared to offer an entirely satisfactory explanation. Of course other causes than nerve stimulation may have contributed to the rise of temperature in those cases as increased retrograde metamorphosis of tissue, or from the sudden accumulation of heat in the body from arrest of those synthetical changes that are involved in the elevation of protoplasm into organized tissue, changes which we know require the conversion of heat into a different form of energy, and in which form it remains stored until released by metabolism later in the cycle and again assumes the form of heat. I have thought it likely that all of these thermic factors, acting in unison and with unusual potency, cause a sudden increase of heat, and that the thermotaxic mechanism fails to respond in a prompt and normal way so as to bring about an equally prompt and active thermolysis, or, if I may so express it, the thermotaxic apparatus is caught napping, and before it can open the flood-gates of heat-loss the temperature rises.

While it is difficult to overestimate the value of the thermometer in clinical work it should not be overlooked that what it reveals is not always a true criterion of the mildness or of the gravity of the disease under treatment. Experience proves that many febrile diseases run a favorable course when a high temperature is registered throughout, while others with only a moderate rise baffle all our efforts and prove fatal in spite of all we can do. Paradoxical as it may seem there may be rise of temperature without fever and there may be fever without rise of temperature. It is true that rise of temperature is one of the most constant symptoms of fever, but it will be readily seen that inadequate discharge of heat from the body through any interference with the apparatus that subserves this function, while at the same time there is only the normal production of heat going on, will cause a rise of temperature as indicated by the thermometer, and yet it would be incorrect to designate this as fever because the changes in the tissues essential to the febrile state, such as increased production of urea and carbonic acid, are not taking place. Again there may be catabolic changes of so active a character going on as would be sufficient under ordinary circumstances to produce a rise of temperature, but at the same time the factors that regulate heat discharge may be so active as to more than balance the increased production and a normal or even a subnormal temperature would result. These considerations should always be appreciated in adopting therapeutical measures in febrile diseases. Rapid wasting, as indicated by the increased amount of effete matter discharged by the emunctories, offers a clear indication for maintaining these emunctories in an active condition, and, at the same time, for adopting measures to sustain the digestive assimilating organs, and for supplying nourishment suitable in quality and quantity to the changed conditions of nutrition.

Antipyretic measures should be regulated in the same judicious manner, always endeavoring to ascertain and to bear in mind those changes upon which thermic phenomena depend. The last few years have placed within our reach a great number of antipyretic agents, but I am convinced that as such, all of these drugs might be dispensed with and little or no disadvantage be felt. They reduce the temperature but they depress the patient to an extent that should preclude their use in any protracted case in which frequent repetition would be necessary to attain a safe temperature. Their use in such cases becomes less imperative while we have such a safe, potent and unfailing remedy as the bath at our disposal. To me it is inexplicable that a remedy that has been known for ages, that possesses so many advantages and so few disadvantages, that has such overwhelming testimony in its favor should still be excluded from the armamentarium of many medical men, or, if admitted, occasionally used in such an unscientific way as to do little more than to lead to disappointment and bring a sovereign remedy into disrepute.

Brand has given full and complete rules for the use of the cold bath in fever and this plan has been adopted in many hospitals and by the most progressive physicians everywhere in the treatment of typhoid fever. The evidence is incontestable that the mortality from this disease has been reduced from about twenty-six per cent. to five or six per cent. by the systematic use of the cold bath. In 1881 my partner, **Dr. McKeough**, published a report of one hundred cases of typhoid fever occurring in our practice and in which cold bathing constituted the main feature of treatment. The mortality in this series was two per cent., and other physicians have reported equally successful results from similar treatment. I have observed that in most cases when the bath has been effectually used for three or four days the temperature thereafter does not rise as high and that other alarming symptoms are less likely to supervene. The explanation is not difficult. The maintenance of the temperature at or near 100° Fahrenheit for a few days when the cause of the fever is most active and pernicious, reduces destructive metabolism, lessens muscular exhaustion, and preserves in activity the functions of elimination, so that much of the poison is disposed of before irreparable damage is done, and the organism so relieved is able successfully to resist the enemy's reduced forces during the remaining days of the contest. The cold bath not only abstracts heat from the body but, as **MacAlister**'s experiments show, inhibits heat production in the cooled muscles, and so acts beneficially in the inceptive process of heat formation.

In concluding this paper it may not be uninstructive to present briefly some cases illustrative of the beneficial effect of the cold bath, and first I shall select two cases of scarlet fever, which, on account of their similarity and their termination, strongly impressed me. In 1872 I attended a healthy young woman in her second confinement. When the child was born her temperature was 104°, and the scarlatinal eruption was fully developed. Next day the temperature continued high and at 8 o'clock in the evening registered 105°. Two hours later it was 107° and coma was coming on. The temperature continued to rise and at midnight she died comatose with temperature 110°. DR. MURPHY, of Chatham, saw the case with me but we could not gain the consent of her friends to use the cold bath, and other means we tried were of no use. In 1884 I was called to see a similar case near the city of Kingston, Ontario. On my arrival I found that the woman had been confined four days previously, the rash of scarlet fever was fully out, the pulse was 160, temperature 106°, and the patient semi-comatose. Cold bathing was at once resorted to and as the temperature fell, coma disappeared, the pulse improved in strength and became less frequent, the stertorous breathing disappeared, and when the thermometer registered 100° the whole aspect of the case was so changed for the better that all were eager to persevere in a plan of treatment that promised so well. During the next four days frequent bathing was necessary to control the temperature, but after that time convalescence was uneventful although it was remarked that even after fever disappeared the pulse remained 130, and feeble for many days. During the summer months few diseases are more fatal to children than acute diarrhœa. These cases generally develop suddenly from some error in diet, the child vomits, becomes restless, moans, soon looks pinched about the face, rolls its head on the pillow, its pulse becomes frequent and feeble or disappears entirely from the wrist and its extremeties become cold and blue. In a large majority of such cases the rectal temperature will be found to be from 103° to 105°, and unless prompt relief be afforded they will die. It is in these cases the cold bath acts like magic. The moaning and restlessness disappear, the respiration becomes slow and easy, the pulse returns at the wrist, the extremities soon become warm after the bath, and sleep is generally secured, often before the child is removed from the water. A purgative and care in feeding often complete the cure, but the temperature should be controlled by the bath until the danger is past. I have for many years depended on the cold bath or cold sponging in acute bronchitis and lobular bronchitis and lobular pneumonia of children, in many cases of lobar pneumonia, in acute dysentery with high temperature, and indeed in most febrile diseases in which high temperature is a prominent feature, and I have never had cause to regret its use. In saying this it will not be understood that other medicines are to be neglected or other indications overlooked.

UNUNITED FRACTURES.*

BY CHARLES W. HITCHCOCK, A. M., M. D., DETROIT, MICHIGAN.

UNUNITED fractures occupy in the various text-books on surgery a position by no means clear-cut and well-defined. Under this head are discussed cases covering all possible variations from the normal, from those in which the union may be delayed yet not entirely wanting, to cases of most persistent non-union.

Most authorities, however, recognize the occasional occurrence of cases which exhibit a peculiar dyscrasia opposing and frustrating every attempt which nature may make to accomplish the repair of the fractures. Cases of unusual tardiness merely, and cases where for a time the presence of fibrous union only seems to forbid a satisfactory result, should be properly relegated to the category of cases of delayed union. Doubtless there are those present who will maintain that, in any and every case, union may be secured, and that, therefore, all cases requiring abnormal time and encouragement are more properly cases of delayed union rather than of non-union. On the other hand, many a surgeon can testify to cases which most persistently refused to unite in spite of many and varied expedients calculated to secure the most favorable environment. Careful search will in some cases reveal an apparent cause, while in others no possible cause can be found. Possible causes of such an undesirable result are both constitutional and local. Some cachexia, due to syphilis, phthisis, malignant growth, or other systemic affection may be the important factor. Among local causes may be mentioned: malposition of the fragments, tissue (ligamentous, muscular, or fascial) intervening between the fragments, irritation due to too tight bandaging, absorption of callous, loosened pieces of bone in comminuted fractures, loss of bone from necrosis, et cætera. It has been claimed that the existence of pregnancy has in some cases conspired to prevent union.

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All plans of treatment have, of course, one object in view, that of inducing nature to abandon her coyness, call into action her *vis medicatrix*, and assume her proper role as an *alma mater*. Such plans are many and varied. Too many have, however, been timid and lacking in effectiveness for this very reason. The following may be mentioned:

(1) Severing ligamentous attachments and freshening the broken ends of the bone has, in the experience of some surgeons, proven most effective.

(2) Subcutaneous puncture through the site of the fracture, with the purpose of securing sufficient irritation to foster normal union, is not a new plan of treatment, but it has, I fancy, scored for itself quite as many failures as successes. Such puncture is by some one recommended to be done with gilt-steel needles.

(3) A seton passed between the fragments was long since tried and, in some cases, effectively. It is, however, not without serious dangers, which will cause no little hesitation on the part of the surgeon before consenting to its adoption. I think the plan is, for the most part, at the present day discarded.

(4) DIEFFENBACH proposed the use of ivory pegs and wiring. This plan has been variously modified. The pegs are removed after a time, when it is thought that they have incited the necessary and desired irritation.

(5) Passing the fragments forcibly together has been attempted by various mechanical appliances, and also by the occasional application of manual force on the part of the surgeon.

(6) Perforation of the fragments near their extremities has been recommended but seems a feeble and ineffective measure.

(7) Friction and compression judiciously applied have, in a few cases, done much to start a hitherto obstinate case on the way to recovery.

(8) As long ago as 1760, resection of the fragments was recommended and practiced. That this operation has stood the test of one hundred and thirty-three years, and is to-day recognized as one of the few effective ways of dealing with this most obstinate condition, is, of itself, sufficient to place its position beyond cavil.

In some cases apposition can be well maintained by external means (splints, et cætera), but in many cases firm wiring of the resected ends is necessary to secure that perfect apposition which alone can make the operation productive of the best and desired results. It behooves the surgeon, however, not to be too sanguine, for even this dernier resort may fail of a happy outcome.

The tendency of modern surgery is to seek boldly for the most efficient means of accomplishing the desired end and then fearlessly but carefully apply it. The words of a late writer in the field of operative surgery present a happy contrast to the timid way in which inefficient measures have been presented for experiment by many authors. I quote from Treves:

"Certain of the modes of treatment advised have little to recommend them. Among such must be named the passing of a large tenotome between the fragments, the introduction of a seton, the insertion of gilt-steel needles into the bone, or the driving in of a number of ivory pegs.

"These timid and half-hearted measures were possibly justified in the days which preceded the introduction of antiseptic methods in the treatment of wounds. They are feeble measures which are blindly administered and which appear to trust more to good fortune than to sound science.

"At the present day, when the making of a large wound (within reasonable limits) is not much more serious than the making of a small one, these imperfect operations have little reason for their existence."

He favors resection of the ends of the fragments, and emphasizes the importance of the best apparatus for maintaining perfect apposition,—preferring to secure this by splints, however, rather than by wiring, which he regards as a measure of but little practical use. A recent journal reports a case in the service of Dr. J. W. White, of Philadelphia, in which he maintained apposition after resection by a plate extending across the site of fracture and fastened firmly to each fragment by two screws. Ultimate result is not yet reported.

Hard and fast rules for action cannot, of course, be laid down, as what would be excellent in one case would be but illy adapted to another. The determination of the necessity for operative interference at all may involve the most important consideration. How far union may be delayed or postponed without calling for operative measures is, perhaps, best decided for each case on its merits, taking into account the circumstances of the injury, the bone involved, the age, occupation, and surroundings of the patient, et cætera. I doubt if any fixed period could be defined as applying to most cases to mark the dividing line beyond which the case would pass from the category of cases of simply delayed union to that of non-union. I shall give briefly the history of two cases, the first of which seemed, and without apparent adequate cause, to be a case of vicious persistence in non-union. The second was one in which, when union was looked for and firm dressings removed, much motion was obtained at the site of the fracture, but the fragments were not separable; an excellent example of pseudo-arthrosis. That this was clearly a case of simple delayed union the sequel proved, as, under proper treatment, the fibrous union rapidly ossified and the result was all that could be desired. Such cases should not be, as they too often are, included in cases of non-union.

Case I.—Thomas B., Irish, aged about thirty-three, apparently healthy, laborer, sustained a compound, comminuted fracture of right tibia and fibula, October 7,

1891. The more serious injury was to the tibia, on which the most violence seemed to have fallen, producing such comminution that several small pieces of bone were removed at the Emergency hospital, where he had been immediately taken and remained some two weeks. The fracture, which was at about the junction of lower and middle thirds and was apparently doing well, was at this time put in fenestrated plaster cast, and came under my care at the man's home. The external wound soon closed and remained so about one week, when it again opened up and continued to discharge. Careful attention was given to keeping the wound as aseptic as possible, and it was sought to stimulate its healing by daily injections of "red-wash." After some weeks the cast was removed, but not the slighteet union had apparently taken place, though careful search with probe failed to detect any loosened pieces of bone. It was about this time that, in my absence from town, patient went of his own accord to the Emergency hospital, where the fracture was cut down upon, and it is said that several pieces of bone were removed. On my return, a fresh cast over posterior metallic splint was applied, same treatment of wound continued, and patient encouraged to be up and about more, each day, on his crutches. No movable pieces of bone could be detected, but wound continued to discharge some pus, each day. It was apparent that no union was taking place, and that there was constant irritation from some source. The cast was removed the latter part of January, thorough examination made, and removal to Harper hospital advised. Here, on January 27, I cut down on site of fracture, but could find no removable pieces of bone. The knife was introduced between the ends of fragments of tibia and the site of fracture thoroughly stirred up in the hope of producing sufficient irritation to secure healthy callous and normal union. The question of a seton passed between the ends of bone was discussed and the plan rejected. Plaster cast was reapplied, and patient kept in bed. At the end of four weeks, no change for the better was apparent, and patient was again placed upon the operating table. The fracture was cut down upon and the ends of the fragments thoroughly exposed. A very slightly movable piece of bone was found on the lower side of the tibia, so firmly held in place that it was removed with difficulty. Sufficient of the end of each tibial fragment was removed to secure a firm, solid, healthy surface. Corresponding resection of fibula was made and the ends of tibia were brought firmly and squarely in apposition and so wired with large silver wire. This brought the ends of fibula in excellent apposition but they were not wired. The wounds were properly dressed and interrupted plaster cast was applied. Patient had careful attention in the hospital for some weeks but wound would not close entirely, discharging through small sinus-like openings, though wound over fibula entirely closed in short time.

Patient was one of those unappreciative, grumbling, complaining patients, and he finally refused to remain longer in the hospital, and persisted in leaving, contrary to advice. A posterior metallic splint held with roller bandage secured to the patient so frail a support that at his urgent request it was reinforced with light plaster cast, and treatment was continued at his home. This gave place to light splints, and finally splints were all removed and a fairly strong fibrous union found to have taken place, though there was much mobility. Patient was directed to have daily frictions and massage over leg, and, also alternating cold and hot affusions, and to make daily efforts to make slight use of the leg. Though he was little disposed to coöperate in any measure for his own good the limb, improved greatly in circulation and consequent nutrition, was apparently as large and healthy as the other, and the prospects of an excellent result were apparently of the best. He was instructed to report regularly for observation, but he was generally disgruntled and discontented, refused to have anything more done for him, would not report for examination, and passed from observation. About this time he made demand upon his employer for two thousand dollars, in spite of the fact that a fire was the cause of his injury, and that they had until now regularly paid him wages. He was promptly cut off from further support, and his employers, in whose interest I had seen him, cared to do nothing further for him.

I did not see him for nearly or quite six months, when, early in November last, he presented himself at Harper hospital, saying that he had come for me to remove the wire which I had put in his leg. This I refused to do. He had, he said, in the meantime not been to any surgeon, and the result was apparent in the angular deformity which he had allowed to take place, the lower third of leg (and foot) taking quite an outward angle from point of injury. From the casual examination which I was able to make, the fibrous union appeared to have become quite firm, since the deformity had occurred. Patient had been fully instructed that such deformity was quite possible and was to be guarded against, but he had refused to follow any instructions, and is probably better pleased at having his leg in such excellent condition to present to a jury, and he has now brought suit against his employers for ten thousand dollars damages.

A full history of the case is offered, as it is one of an annoying class of cases which give the surgeon no little anxiety and are not infrequently followed by suits. It is wise for the surgeon to have competent advice, and well that at least one other surgeon should be familiar with the history of the case. I can but think that there was present here some constitutional dyscrasia, although I could get no specific or other objectionable history.

Case II.—G. Z., engaged in the erection of an iron railroad bridge, September 27, 1892, fell suddenly about thirty feet, was sent to Detroit, and at Harper hospital came under my care. When the inventory of his injuries was complete, it was found that he had escaped with only a fracture of left nasal bone, fracture of left lower maxilla, fracture of left femur (at junction of upper and middle thirds), laceration and contusion over left eye, with blood extravasated into conjunctiva, lacerated wound through left lower lip. The fractured femur was put up with long, straight splint and Buck's extension. Swelling soon subsided, and a wound over site of fracture (which at first made us think we had a compound fracture to deal with) soon closed and admitted of the application, on October 10, of a plaster cast extending from ankle to hip and around pelvis, the extension being continued. He seemed to do well in every way, and cast was removed November 4. There was apparently union but great mobility at site of fracture. A light splint was applied, but daily removed for the administration of vigorous friction and massage of either thigh and knee. The fragments of bone were also daily and forcibly crowded together. He improved rapidly under this treatment, and fracture daily grew more firm and solid. He left the hospital November 17, walking on crutches, one of which he soon discarded for a cane. Friction, etc., were continued at home, and when I saw him last, about the first of January, he believed his leg as strong as it had ever been, and was to resume light work. There was present about three-quarters of an inch shortening. Patient resumed light work January 3, 1893.

AN INQUIRY INTO THE CAUSES OF THE MORTALITY OF DIPHTHERIA, AND SOME SUGGESTIONS WITH REFERENCE TO THE TREATMENT OF DIPHTHERIA.† *

By ALONZO BRYAN, M. D., DETROIT, MICHIGAN.

I SPEAK with candor. Therefore permit me to say that, according to my understanding and convictions, I believe that many noble-minded and sincere thinkers in our profession are unwittingly impeding the proper evolution of the treatment of diphtheria by certain grievous and most unfortunate errors, in which they repose a blind and implicit faith. They are doubtless honest, but dreams are honest, and are none the less fanciful for being so.

I believe that the frightful mortality of diphtheria is due almost altogether to its constitutional treatment as adopted by physicians at large. In the treatment of diphtheria there are deleterious medicinal agents in extensive use. In my opinion the two most destructive of these, and employed blindly as remedies, are alcoholic liquors and corrosive sublimate, given internally. I believe that both of these so-called remedies are in many instances deadly when given in cases of diphtheria. For these death-bearing agents a most strange fascination possesses the minds of a very large number of medical men at the present day. Hardly anything has been known like it since the palmiest days of venesection. If the infatuation progresses, more persons are liable to die under the baleful influence of this ghastly constitutional treatment than succumbed to the murderous management of wounds which preceded the advent of Paré's methods in surgery. In this arraignment I am convinced that I use no extravagant terms. They are indeed not so strong in their expression as the bier and the coffin which appear before our eyes every day; and these latter are phenomena which should arrest the attention of every thoughtful man. According to the formal and systematic reports of authorities to-day, nearly one-third of all the persons affected by diphtheria die of the malady. And, according to the statements of medical journals and standard books, nearly all the cases of diphtheria are submitted to the alcoholic treatment, and to this is often added the treatment by the ingestion of corrosive sublimate.

Let us proceed to examine these deleterious agents lauded as remedies. Should I be permitted to advise, I would counsel a physician when he is confronted by a case of diphtheria, to not become excited as in the presence of a fire, but to view the circumstances with equanimity; and above all, to take a deliberate and quiet survey of the nature of the remedies which his imagination proposes; and let him on such an occasion be not too much filled by a deferential reverence for the sanctity of authority; for it is often reverence in medicine that jeopardizes and destroys the life of the patient, and retards a progressive evolution in the art of healing. Some old man with the garb and mien and thought of a recluse, may have immagined that it is a good thing to fill a delicate system with corrosive sublimate, and then to wash the poison out again by means of internal ablutions of whisky. Some fanatic may have had a disordered dream and then adopted it into practice. I have always said, and I say now, beware of the ancients; and notwithstanding them, let the torch of your reason ever cast its beams in front of you. Therefore, let the alert and thoughtful physician, when brought into the presence of diphtheria (or of any other adynamic disease) look up a much neglected book, namely, "TAYLOR on Poisons" (newest edition). Let him read therein what that author says on the subjects of alcohol and of corrosive sublimate as poisons. It is well to do this before having struck the first blow at the patient. The unfortunate one is already stricken by the disease, therefore let the medical attendant forbear until he shall have thought at least twice. I cannot here adduce all that TAYLOR has said on the subject of alcohol as a poison. Suffice it to abstract a few of his conclusions. They are these:

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† In this note it is a matter of extreme regret on my part to be compelled to say that during the preparation of this paper I ascertained that a peculiar circumstance had deprived me of the pleasure of obtaining a record of the ultimate and collected results of my treatment of diphtheria for many years past. For my record I had relied on the books of the Detroit health office. When I came to look into them I found there the name of another physician named Bryan, and whose initials are just the same as mine. Therefore, for the most part I was unable to distinguish the record of my own cases from that of his. However, from all sources, I have identified enough cases to show that the mortality in my own treatment of diphtheria is rather less than ten per cent. The general mortality of diphtheria in this city is a mean of about thirty per cent. A. B.

* Read at a stated meeting of the DETROIT MEDICAL AND LIBRARY ASSOCIATION, and published exclusively in The Physician and Surgeon.

"Small quantities of alcohol frequently kill children; and larger quantities often destroy adults. In all the cases there is intense congestion of the brain and lungs. There is usually great damage to the mucous membrane of the stomach; it may be found congested, inflamed, ulcerated. Either with or without death, there may be delirium, coma, paralysis. In acute alcoholic poisoning death may be the sequel of continuous symptoms, or there may be a remission closely followed by a renewal of the symptoms and by a fatal termination. After the acute poisoning, a prostrated and enfeebled condition of the general system may endure for days or for weeks when the dose has not been sufficient to kill, or if so, when death is long delayed. In numerous instances there is granular degeneration of the kidneys." In the cases of chronic poisoning the list of symptoms is long and painful to contemplate, but their citation is not essential for the purposes of this paper. The alcohol that is eliminated escapes through all the emunctories. Every excretory gland exerts itself to rid the economy of the poison. Such knowledge on this subject, and much more, do we get from "TAYLOR on Poisons." RICHARDSON (than whom there is no higher authority), in his "Ten Lectures on Alcohol" (delivered before the Society of Arts, London), says that alcohol increases the pulse-rate many thousands of times in the twenty-four hours. How exhausting then, must alcohol be in adynamic diseases? It is this powerful, and in adynamia, deleterious, agent that has been brought forward in vaulting and dithyrambic style, as the soverign balm for those who are in pain, in fear, and in danger of death, on account of diphtheria. Just think about it. Its advocates say just have the patients swallow some corrosive sublimate every two hours, and at the same time give them plenty of liquor to wash it out with.

Now let us examine the subject of corrosive sublimate. Refer to "TAYLOR on Poisons," and turn to the article "Corrosive Sublimate," in that standard authority. In evidence it will be found there that all forms of mercury (even in few and minute doses, and cautiously given) wherever there is a granular state of the kidneys, with albuminuria, are especially dangerous and destructive. In such cases there is ulceration and gangrene of the throat, destruction of bones, marasmus and death, as frequent occurrences. I am informed upon respectable authority that fully twenty per cent. of all the cases of diphtheria treated in a certain large and well regulated hospital show the symptom of albuminuria. In that hospital they say that "whenever one of our diphtheria patients gets gangrene of the throat he is sure to die." In that same hospital corrosive sublimate and whisky are the "sheet-anchors." Just think about all that. In that hospital they have *two* "sheet-anchors," corrosive sublimate and whisky. They have provided well there, for hardly any ship carries more than one of those steadfast arrangements. But the history of medicine affords an account of other "sheet-anchors." Bleeding was once a "sheet-anchor," immersing amputated limbs in boiling pitch was a "sheet-anchor." I have no doubt that a large number of the cases of gangrenous diphtheria found in that hospital are of the cases wherein there is a complication of albuminuria, and to which the corrosive sublimate or some other form of mercury has been given. The medical chemists say that corrosive sublimate principally passes away from the system with the urine. Think of those great emunctories, the kidneys, being filled up and impeded in their operation by albumen, and then, of the system behind them loaded with corrosive sublimate that has been given perhaps every two hours for many days. Per force of such dreadful and unfortunate circumstances a patient must needs die. In that hospital the mortality of diphtheria is said to be about thirty per cent. I do not believe the mortality, when the cases are treated properly, should be more than ten per cent. Nay, it should be rather less.

Now, before having proceeded further in the investigation of these questions, it will be well to note the forms of death which supervene in the disease; for such note will throw light upon the value of the medicines employed. I believe that asthenia is conceded to be by far the most frequent cause of death. The asthenic condition gradually deepens; the whole muscular system fails, fails; the heart becomes weaker and weaker, flutters, and finally stops; the scaleni and intercostal and the diaphragm become utterly exhausted; and the laryngeal muscles themselves become wearied unto death, permitting fatal occlusion of the glottis by collapse. I say I believe that it is commonly conceded that general asthenia is the most frequent cause of death in diphtheria. Then there are the paralyses proper that either directly or indirectly cause death. They are sudden in their appearance. The heart may be paralyzed, whereupon life will instantly cease; the muscles of the larynx may be paralyzed, whereupon the patient may die of sudden asphyxia, the immediate result of collapse of the glottis. Or, there may be paralysis of the diaphragm, or of any of the external muscles of respiration, in which case the effects of fatal asthenia are immensely hastened by a prostrating stress thrown on the other muscles of respiration, inducing gradual (asthenic) asphyxiation. Also there may be paralysis of the œsophagus, or of the laryngeal muscles, rendering deglutition difficult or altogether impossible; in which case the patient may die of inanition, or of asthenia brought on by the complication. But, in diphtheria which is not disastrously treated, I believe that these paralyses are rare. And, beyond all peradventure, the so-called direct paralysis of the heart is, in fact, usually asthenic cardiac failure, or asthenic failure of some other organ or organs equally important. Still, in the malignant forms, paralysis may appear within the first week or ten days. Also, death by lethargy, and by coma, is especially liable to ensue when large quantities of liquor are given. In a number of cases the lethargy of the brain prevents supplementary voluntary power in breathing, and thereby assists in the induction of gradual asphyxia. In small children especially, asphyxia is often brought about by occlusion of the larynx by false membrane, and in such cases alcoholic lethargy rapidly hastens the fatal climax.

Also for the purposes of this article, it is valuable to note certain particular and formidable general phases of diphtheria. The cases with these phases may be designated as the malignant. I would characterize septic, and the so-called "gangrenous" forms, and the nasal, as malignant. I believe that there is no specific difference in the poison that produces malignant diphtheria and that which produces the milder forms. It is the particular state of the seat of the intromission of the germ that determines whether the case shall be mild or severe. All the malignant cases, the complete history of which I have been able to obtain, have given an account of a previously diseased condition of the part attacked. The worst cases are those that have been, and are, coincidentally affected by chronic catarrh of the throat and nares. And, it is here as we would expect, patches of mucous membrane are denuded of epithelium, and there is often superficial ulceration. In scorbutus a similar condition is seen. I believe that it is these raw surfaces that yawn to receive the germ. Furthermore, the hypertrophied lymphatics in the neighborhood are patent conduits, eager to take up and carry the germs and their ptomaines abroad from the gates of entrance. I believe also that the epithelium is the (perhaps perfect) wall against the specific germ of diphtheria. Hence, preserve the epithelium both before and after the invasion of the disease. More than all, do not destroy any of it either by means of escharotics, or by alcoholic applications, or by mechanical denudation. And do not institute an exfoliation of this protective covering by the specific and constitutional effects of mercury; do not, I pray you.

Another very important question presents itself. Why do the germs run a course in the system and disappear? They complete a cycle of life in the system and are no more. Why is this? So far as I am aware we do not know. They may possibly be destroyed by their own ptomaines. But all is conjectural. However, seemingly the germs follow the path of a cycle, and then their existence is at an end. It is the knowledge of this cycle of germ-existence that is of vast importance in the treatment of diphtheria. I shall call attention to it again. And, to me, what seems a highly important possibility, is this: I have a very deep impression that the mild forms of diphtheria are those where there are no solutions of continuity of the epithelium. In such instances the specific micrococci do not perhaps at all gain admission into the general system; but their ptomaines may be absorbed somewhat and thereby produce mild systematic effects. I believe that such instances furnish a vast majority of all the cases put together. They will end towardly with almost no treatment at all. Be careful not to break the epithelium, and if there is a wound upon the body keep it dressed in a thoroughly aseptic manner. Prevent if possible the intromission of germs into the system at large. I will also say that I do not believe that moderate swelling of the contiguous lymphatics and of other soft structures is much evidence that the germs have gained admission to the general circulation; for those parts may swell by turgescence, and by a stress lain on common absorption. Nearly all the cases just indicated will get well if not too much interfered with by meddlesome medicine. They should not be thrust into great peril by mechanical abrasions, by escharotics, or by alcoholic and mercurial destruction of the epithelium. I repeat, do not, I pray you, become the unwitting fomenters of a dreadful mortality by the employment of dangerous and deadly agencies in these mild cases, whose numbers are vast. Do not convert a great number of these simple, and comparatively innocent cases into malignant forms by virtue of your treatment; for simple and cautious antisepsis alone will cure nearly all.

Now let us revert to the alcoholic treatment of diphtheria, and to the treatment of diphtheria by the internal administration of corrosive sublimate. I do not believe that alcohol, or any alcoholic beverage, can take a curative part in the medical treatment of diphtheria. Upon the other hand, I believe alcohol to be dangerous and destructive. I believe that alcohol is one of our most powerful anæsthetics. In the lethal stage of diphtheria some of our friends give it in extravagant doses to arouse the patient from a condition of torpor. **Taylor**, in his indisputably authoritative work on " Poisons," affirms that in cases of death from the effects of alcoholic poisoning " the lungs, or brain, or both, are intensely congested," and that " the fatal termination can be almost invariably traced to that cause." Now, in the cases of diphtheria where there is a dangerous congestion of the lungs, brought on by protracted dyspnœa, our friends just pour in the alcohol. Yes, pour it in and make the fire blaze as high as possible. Fan the congestion into an inflammation. **Dr. Richardson**, (that renowned and sincere investigator) says that full and continuous doses of alcohol reduce human temperature to below the normal standard. Our friends, when a patient's heat falls to an imminently dangerous subnormal reading, just swim him in alcohol. Some zealous advocates give to an adult, so affected, a fluid ounce and more of strong whisky every two hours, so long as his life lasts. When such cases have fallen into my hands I have had the pleasure of rapidly increasing their temperature by forbidding any more alcohol to be given. As I have already said, **Dr. Richardson's** investigations prove that alcohol increased the pulsations of the heart many thousands of times in the twenty-four hours, doubtless tending to induce its gradual exhaustion thereby. The investigation also proved that alcohol brought on general muscular weakness, which was only a confirmation of what **Franklin** had demonstrated about a hundred years before. Our friends of alcohol say, in diphtheria " support the strength," therefore give whisky *ad infinitum*. Truly, reason is of all shades and degrees.

All intelligent persons are aware that profound coma can be easily induced by alcohol. Suppose that we increase the lethargy incidental to partial asphyxiation in diphtheria by the abundant administration of alcohol. Why, we lose the supplementary volitional power of the brain over motion. The patient sleeps, and all is not so well; we get cyanosis, then palor, then death. Or, if coma does not supervene, the additional stress of labor which the system puts upon itself to rid it of the alcoholic poison, wears it out unto death. The muscles, else might have borne up against the depressing cycle of diphtheria successfully, fail certainly, gradually, and fatally. The muscles of respiration yield; and the heart stops. According to my belief, that is the way that alcohol " supports the strength." Such results as alcohol accords afford the grimest sarcasm against a false but widely spread theory.

As to alcohol in diphtheria, as well as in all other adynamic diseases, I believe it to be a delusion and a snare. I believe it to be a dangerous and useless agent when employed, as it often is, in the condition of shock incidental to grave surgical injuries. In such instances it anæsthetizes instead of revives the appalled and stunned economy. An eminent authority (**Kottmann**) has lately declared against its use in shock; so of others; others follow and the tide turns.

Now, once more as to corrosive sublimate, that most virulent of the mercurials. Some medical people give it internally for the cure of diphtheria. They give it from the incipiency of the disease until its termination. They say that wherever a refractory germ persists in its course, and enters the circulation, it shall be met by a fatal dose of corrosive sublimate circulating in the blood, and already prepared for it. And each and every germ must be so met, and then their dead carcasses floated out of the system in a perfect flood of whisky. Everything is excited, and the dead germs, ptomaines and all, are carried away in a hurry, and the sinking patient is "supported" at the same time. A few days ago I saw a man going along the street in a zigzag fashion; it was cold and his gait was uncertain; so I offered him support of another kind (external), saved him from a policeman, and landed him among his friends. This man had had only a part of the treatment, the alcoholic. If I am irreverent it is because I have a safer and more rational treatment to offer; and it is one which I have proven over and over again. The corrosive sublimate people are wrong; their remedy is very dangerous, and often fatally destructive.

In diphtheria the function of the kidneys is frequently oppressed by albuminuria. Many years ago **Dr. Craigie** and **Sir R. Christison** (of England), made extensive observations which proved conclusively that persons affected by granular kidney, with albuminuria, are particularly liable to the dangerous and fatal impressions of mercury. Persons with such an affection of the kidneys, who take mercury, are liable to gangrene of the throat, necrosis of bones, and death; and these fearful results may follow from one to a few alterative doses, or applications, of the drug. **Bartholow** has said that "important changes occur in the kidneys (in diphtheria), and at a very early period of the disease. They are swollen, intensely hyperæmic in the severe cases, but little so in the mildest; but, in all cases changes occur in the Malpighian tufts and in the tubules. The tufts are hæmorrhagic, contain micrococci colonies, and are surrounded by lymphoid cells; the epithelium of the tubules is cloudy, granular, and swollen, and is often detached in the form of casts with epithelium adherent." Let those who wish to reason put **Bartholow's** statements, and those of the eminent pathologists named, and that of the aforesaid authoritative toxicologist, together. The inference will be at once impressive and conclusive.

Certain so-called septic cases are doubtless often produced by mercury, in the form of corrosive sublimate or otherwise, but which cannot be eliminated by the already incapacitated kidneys. **Taylor** says that bichloride of mercury is mostly eliminated by the kidneys; and that when they are oppressed and unable, the poison is thrown back upon the system with the destructive results already described. I have no doubt that under such circumstances, gangrene and putrefaction often occur independently of the specific nature of diphtheria, and that common septicæmia ensues as a matter of course; the mercury being the prime mover in the dreadful train. Nay, in these cases there is doubtless more than this: altogether there are the septic effects of mercury, the septic effects of the microbe of putrefaction, and the septic effect of the diphtheria microbe—the mercury having perhaps thrown open the door for the entrance of the two latter forms of poisoning.

As a proper interpolation, permit me to say that the older disastrous methods of treatment, in civilized places, have faded away. Blood-letting, catharsis, repeated emesis—and tartarized antimony in "broken doses," lobelia, and such like, are matters of ancient history, to be reverted to as remarkable curiosities. But the days of those remedies had their "graver and more fatal epidemics." The mystery of the gravity of such epidemics may often be solved by studying the gravity of the remedies employed! An evil and blind genius may sometimes fall upon the times.

In conclusion, permit me to present the proper and rational treatment of diphtheria, in so far as I am able to conceive it. If I have been prolix in saying what not to do, I will be brief in saying what to do.

The first thing to consider is that diphtheria is produced by a specific germ (or, as is remotely possible, by a variety of specific germs), and that the germ runs a cycle and disappears. At present, as I believe, there is no known means of preventing this occurrence. Our germicides certainly do not reach all the germs. Those that are external we are only able to decimate; those that are in the lymphatics and in the system at large we cannot attack at all. While this cycle is in progress what shall be done? Why, conserve, and add to the strength; and resort to the best and strictest antisepsis, both externally and internally. Give the patients nutritious and easily digested foods; predigested foods if possible. Malted milk is excellent for the purpose, and there are other excellent foods of the same class. In cases wherein deglutition is impossible on account of paralysis, inject absorbable foods and fluids into the rectum. I regard the injection of fluids through the œsophagus into the stomach as being very dangerous in diphtheria, on account of the great liability to spasm of the larynx. I believe that spasm of the larynx in such cases usually causes fatal prostration and sudden death; therefore, do not resort to it at all, for the paralysis of the muscles concerned in deglutition, will, in all probability, be transient; and in the meantime considerable efficient nutriment may be administered per rectum.

As to antisepsis, if the patient's strength will permit, the first thing to do is to cleanse him from head to foot with warm soap and water. Then the face, head, neck, and forearms should be washed with a suitable disinfecting solution; say a proper solution of the bichloride of mercury, or of the peroxide of hydrogen. The interior of the throat, and of the nose should be washed out not oftener than once every two hours with a solution of the peroxide of hydrogen. This destroys some of the diphtheria germs and lessens the liability to septicæmia. If the patient is very weak do not disturb him so often as every two hours, once in three will do. If the symptoms are not too urgent let the patient rest undisturbed from 12 o'clock midnight until 6 in the morning. I believe too frequent disturbance to be a great cause of death. A strong mixture of quinine and syrup of yerba santa, or of liquorice, may be given in doses every two to four hours. Quinine is a mild germicide, and when so given disinfects gently the primæ viæ. The tincture of iron mixed with syrup, and given, acts in a similar manner, with the additional power of being a tonic for the blood. In case that apnœa threatens by reason of occlusion, or of stenosis, of the larynx, a surgeon should be called, and requested to make an opening in the trachea. However, I view this as an unfortunate contingency, for I regard tracheotomy as increasing the dangers from sepsis. I would advise the surgeon to use a cautery (if such a means is practicable), so as to sear the edges of the wound as he proceeds; for in this way the intromission of germs and ptomaines into the lymphatics and blood-vessels at the seat of the operation might be prevented, at least for a time. After tracheotomy I counsel the same mild measures that I have already indicated. As to intubation, I have had no experience in the observation of its effects; but where there is dangerously oppressive occlusion or stenosis of the larynx it might subserve a good purpose. But it is my opinion that all such cases as those which are reduced to so low an estate as to require an operation, are not liable to recover at all.

The paralyses of diphtheria are almost invariably transient. They appear suddenly, and after a brief duration disappear as suddenly as they come. Their transient nature is a phenomenon worthy of thought and comment. According to my observation, when paralyses occur in the acute stage of diphtheria there is a coincidental subnormal temperature. This fact points out to me that perhaps the paralysis is brought about by the slowing of the rate of nervous conduction by a lessening of the natural caloric of the body; for it is a principle well known that a depression of temperature will decrease the velocity of nervous force. It is my belief, therefore, that to sustain the heat of the body is a prophylaxis against paralysis in diphtheria. The application of external heat is perhaps the best means. When there is a subnormal temperature large and frequent doses of alcohol will still further rob the system of its heat and thereby greatly facilitate the supervention of paralysis—perhaps paralysis of the heart, which of course is instantly fatal. Upon the principle urged the application of heat will tend to shorten the duration of, and cure, the paralyses of diphtheria.

The inhalation of oxygen, immediately before and after an operation is doubtless valuable.

Abscesses of the neck, and also of the middle ear, sometimes occur in the malignant cases of diphtheria, and they should be treated with extreme wisdom and caution. The opening of a diphtheritic abscess by surgical means is a very grave matter, and should not be lightly undertaken. It is my opinion that the abscess should always be opened by means of the actual cautery, so that no blood-vessels or lymphatics may be laid open, and that secondary infection may be avoided thereby. The cavity should be instantly washed out with a very efficient antiseptic solution, great care should be taken not to lacerate the pyogenic membrane and thus avoid sepsis from a source of violence.

If from any cause septicæmia supervene, I still recommend the same mild, gentle, and cautious treatment as that which I advocate in the cases of less grave import. And I here affirm solemnly that I do not believe in the alleged efficacy of alcoholic liquors in any form of septicæmia. In common surgical septicæmia I eschew them, as I certainly do in all other adynamic diseases. Most fortunately, however, when a kindly and cautious treatment is adopted from the beginning in diphtheria, septicæmia does not by any means so often occur.

The so-called "gangrenous" phase of diphtheria I regard as being simply an almost certainly fatal extension of an already grave septicæmia. Mild measures are unavailing, though they paliate; heroic measures but hasten the tragic end.

And now, with extreme sincerity and candor, I leave the contents of this article to the gracious consideration of those who may honestly and conscientiously differ from me on so momentous a subject; and to those whom I hope to convert to a belief in the doctrines expressed. And if I have any sympathizers who think and feel as I do myself on this intricate but humane question of science (and involving for the most part but charitable labor), to imagine their existence and presence is a most grateful thought indeed.

LECTURES.

ON DISINFECTION OF THE HANDS.

By PROFESSOR TARNIER, Paris, France.
PROFESSOR OF PARIS FACULTY.

In recommencing our clinical lessons this year we could not think of a more important subject than this one of disinfection of the hands. Every day you see us all take the greatest care in our aseptic toilet of the hands. Why? It is admitted now throughout the world that the most important matter in keeping woman in confinement healthy and well, is that her genital organs should be free from all pathogenic microbes, and that the hands of the accoucheur be clean. If not, he can certainly carry hurtful microörganisms into the organs. The vaginal touch, then, is dangerous without antiseptic precautions. Yes, certain authors think that it is better not to make use of the touch during labor. This we cannot agree with, for it gives the most indispensable information of the dilatation, and of the possible morbid incidents that can be arrested. We have only to mention prolapse of the cord to prove this. Without the touch obstetrics would be a useless art. But it certainly must be practiced with precautions that cannot be too aseptic. We must not teach you to despise touch, without which you will make the gravest errors of diagnosis, but we should teach the best way to clean your hands, which in our present mode of life are always covered with germs. Our laboratory experiments will prove this. You have only to put one finger into a culture liquid and see the large colony of microbes that will develop in it. When intern to the maternity we tried to make some studies on puerperal fever and could not understand then why it was that on certain days all the women in the wards would become infected while those who had been in some time were all right. We know now that it was dirty hands. Dr. Maygrier reported the following case seen in 1891: A woman who was perfectly well went to be confined at a midwife's, whose hands were most likely septic, for this person was taken with fever and died. A second case, then a third one, went the same way. A fourth woman was to be confined but the midwife, after making an examination became frightened, and sent this last case to another house to be confined. The result was the same—septicæma and death. This was evident proof of infection in this woman, which determined a number of deaths in healthy women.

What, then, are the conditions under which the touch can be practiced without danger? First, the epiderm must be intact. If you have suppuration on any finger you should not practice accouchments until it is completely cured. Last year one of our hospital women had a felon and infected three or four women. Several years ago a doctor had quite an epidemic of puerperal fever and sought in vain the cause. Dr. Siréday, called in consultation, noticed that the physician had a boil on his neck, and he probably scratched it or touched it during his service and thus carried the infection to the women in confinement. All the sources of infection in the family or hospital service must be watched for. And none should perform dissection, or carry on pathological studies (pathological anatomy) when engaged in confinement cases; surgery is, of course, almost as bad.

Semmelweiss, in the Vienna hospital, had two services for accouchment, one of which had students who dissected at the same time. In this service he soon had puerperal fever, but on making a rule not to allow students while dissecting to frequent his wards, and insisting on disinfection of the hands with chloride of lime solutions, he got rid of the infection. At that time he was not believed, but to-day they are raising a statue to his memory. If you have the slightest scratch on your fingers cover it with iodoformed collodion. You will thus protect yourself from the vagino-vulvar liquids, no matter what state they may be in, and you will prevent your patient from contracting any dangerous trouble, through your fault.

You must not only cut your nails short, but be careful in cleaning them. The files used are not above reproach, for you may scratch with these points under the nail and make a little opening. It is best to use a wet, clean cloth which you can introduce under one corner of the nails. Or, make use of bone, ivory or wooden, nail cleaners. If any very extra cleanliness is wanted for Cæsarean operations it would be well to scrape the back of the nails also.

For washing the hands, the soaps called "antiseptic" are little if any better than good, ordinary soap. Use a brush as well, and rub it over every part of the hands. Even after the most careful cleansing the hands are rarely free of micro-ŏrganisms. Forester (of Amsterdam) made some studies on this point. He washed his hands carefully, and then put them in a concentrated solution of boric acid, and then into a solution of one and one-half per cent. of carbolic acid, and yet he got cultures of microbes from them. Afterward he used Van Swieten's solution (one in one thousand of bichloride of mercury) which he found to be the best antiseptic. We should like to mention here that we proposed first to wash the hands in this solution, at a congress held in London ten years ago, as you can see by the accounts of it published at the time. But we recently made some experiments that prove that a solution of corrosive sublimate (twenty centigrams for one thousand grammes) is as efficacious as the one of one gramme for one thousand. In this clinic we are in the habit of soaping the hands well in a solution of forty centigrams to one thousand of water, and feel sure it is strong enough to obtain good results. It has been said that the sublimate combines with the soap and weakens the action, but we get rid of this by having the solution run on to our hands from a small spigot, and the constant running away of the solution, over the hands, prevents the decomposition of the sublimate. We have taken the hands of the *chef de clinique* constantly and put them into culture liquids which have remained sterile. Kummel found that carbolic acid at five per cent. was also efficacious but in practice it is too caustic. Fürbinger goes through the following operations: (1) Washing the hands with soap. (2) Brushing. (3) Washing them with alcohol. (4) Again with sublimate solution. We have adopted the idea of using alcohol and arrange so that a tablespoonful is used on the hands before using the bichloride. Lately an accoucheur of Kiew, Dr. Belaiëff, recommends us to put our hands first into Prussian blue, and then wash and rub them with soap until we get all the color off. He thinks that it is only by brushing and washing for a long time that proper antisepsis is accomplished. It would certainly be a good plan to do this in a large accouchment service, so that the professors would be sure that the hands were properly washed, but it takes a quarter of an hour to get the blue off by brushing, and we prefer permanganate of potassium solution (one in one thousand). This gives a brown tint to the hands and this is what we use to put the students' hands into. If after having done so the whole hand is uniformly brown, we can be sure they have been properly washed, but if we find some white spots on them it is because they have not been well done, and we make them recommence. Dr. Kelly, an American accoucheur, has written on permanganate of potassium as a good microbicide in washing the hands.

To sum up: (1) Wash your hands and brush them with soap under the spigot, from which is running water containing forty centigrams of corrosive sublimate to one thousand of water. (2) Continue under this solution until no more soap is on the hands. (3) Clean the nails well. (4) Wash the hands with alcohol. (5) Rinse them again under the sublimate solution. (6) Put them into the permanganate of potassium solution (one per one thousand).

But you will ask me how you are to get rid of the brown color made by the permanganate? This is easy. After you have finished put them into a solution of bisulphite of soda, and you will have the satisfaction of having perfectly aseptic hands in the service, and on leaving the wards have your hands whiter than when you came in.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, JANUARY 23, 1893.

THE PRESIDENT, FREDERICK W. MANN, M. D., IN THE CHAIR.

PATHOLOGICAL SPECIMENS.

DR. T. A. MCGRAW exhibited part of a thyroid gland removed from a patient sixty years of age. It had interfered seriously both with swallowing and breathing. It had grown very rapidly and was a colloid cystic degeneration of the gland. The enlargement extended below the sternum and not until that part was removed did she get relief from the difficult breathing.

DR. J. H. CARSTENS: Is it safe to remove the whole thyroid gland?

DR. MCGRAW: It is better to always leave a part of the gland.

READING OF PAPERS.

DR. H. O. WALKER read a paper entitled "Hæmorrhoids."

DR. D. LAFERTE: These patients are frequently dismissed too lightly. It is undoubtedly the proper thing to make a thorough examination, and if this be thoroughly done the diagnosis is easy. Itching, bleeding, etc., are not positive signs of the trouble. Piles are not always a dilatation of the hæmorrhoidal veins, as we sometimes find in apoplectic conditions. The proper thing to do is to operate if the patient will submit. If they will not submit to an operation I frequently find a suppository of tannic acid, three to five grains, to be of value. Internal bleeding hæmorrhoids should be quickly attended to. I agree with DR. WALKER in the manner of treatment, especially with the ligature. I use the ligature both in external and internal piles. I do not snip them off or make any incision.

DR. E. T. TAPPEY: The WHITEHEAD operation is only applicable where there is a circle of tumors around the rectum. Stricture is liable to occur if the mucous membrane is removed in its entire circumference.

DR. W. P. MANTON: How do you get the mucous membrane down to the anal skin when you remove only a part of the circumference? I have had one case of WHITEHEAD's operation and it was a good result. I have found palliative treatment good. Tannic acid, iodoform and belladonna are all good remedies and the injection of half an ounce of cold water half an hour before going to stool; is of great value.

DR. LAFERTE: Do you find many cases of hæmorrhoids complicating the various displacements of the uterus?

DR. MANTON: I do.

DR. MCGRAW: I do not agree with DR. WALKER in the use of the ligature, because it leaves a sloughing, dirty wound. I would much rather leave a clean-cut antiseptic wound which would heal by first intention. WHITEHEAD's operation is the one I think gives the best results, leaving as it does the most perfect rectum and anus. It is most applicable in those cases where there is a redundancy of the mucous membrane, whereas, if the mucous membrane is scanty it is not so good. Palliative treatment is of great value in these cases. Cold water is very much better than hot.

DR. J. H. CARSTENS: A case was in my office yesterday whom I treated ten years ago and she has since remained perfectly well. Tannin locally, together with aloin, strychnine and belladonna for constitutional effect is good treatment. Some kinds of piles must be operated upon, but I do not always use the ligature. Many cases should be operated upon as DR. MCGRAW says, leaving a clean-cut antiseptic wound. Sometimes I inject carbolic acid into the pile, slit it up, turn out the slough, and allow it to heal up after washing it out.

DR. DONALD MACLEAN: This discussion is an epitome of what has appeared in the medical literature in the past thirty years. The question which has often occurred to me is this: Has there been any advance made in the treatment of these affections since I was a student thirty years ago? In those days internal hæmorrhoids were considered to be vascular tumors and they were treated by a ligature. External hæmorrhoids were considered too painful to be treated by ligature and we were taught to clip them off with the scissors, the patient being under an anæsthetic. It seems to me to be a perfectly barbarous procedure to ligature an external hæmorrhoid. I have practiced those methods, namely, ligaturing the internal, snipping off the external, under an anæsthetic for the last thirty years and have always had excellent satisfaction, not having seen in thirty years' experience a single case of subsequent stricture, alarming hæmorrhage, or destructive ulceration from these procedures. I have employed also the clamp and cautery.

Dr. D. LaFerte: What difference do you make between internal and external hæmorrhoids?

Dr. Maclean: The internal hæmorrhoid is an angioma. The external a venous tumor covered by skin and very painful.

Dr. E. B. Smith: In internal piles a new tissue is formed. I wish to record one case in which in painful external hæmorrhoids complicated with syphilis I obtained an excellent result.

Dr. J. B. Newman: In treating piles more attention should be paid to the condition of the bowels. The fountain syringe is the best instrument to use. The bowel should be freely douched with cold water before moving. In my experience some cases have recovered from the use of the fountain syringe alone. A sponge soaked in hamamelis and placed between the buttocks has been found to be good palliative treatment.

Dr. H. O. Walker: Dr. McGraw speaks of the ligature producing a septic wound with ulceration. If the ligature be antiseptic it produces no ulceration. If you use the ligature in external piles first make a circular incision through the skin around the base of the pile, then apply your ligature and you will have no pain. Why does not Dr. Carstens simply slit open the hæmorrhoid and be done with it without using the carbolic acid.

Dr. Carstens: I use the carbolic acid first to coagulate the blood in the tumor and then remove the clot.

REPORT OF A CASE.

Dr. J. Flintermann reported a case in which sudden death occurred in an apparently healthy woman whose ovaries had been removed four years ago. Post-mortem showed a fatty heart with thin and translucent walls, lungs œdematous, kidneys denoted interstitial nephritis. The question of interest that arises in this case is, Did the removal of both ovaries have anything to do with cardiac degeneration?

Dr. Carstens: The case is easily explained by the condition of the kidneys. The removal of ovarian tumors is not to be held accountable for the cardiac degeneration.

Dr. Flintermann: I do not think the condition of the kidneys is sufficient to account for the other changes which were found at the post-mortem examination.

Don. M. Campbell, M. D., Secretary.

STATED MEETING, FEBRUARY 13, 1893.

The President, FREDERICK W. MANN, M. D., in the Chair.

PATHOLOGICAL SPECIMENS.

Dr. T. A. McGraw: This fragment of bone, which is the apex of the frontal bone showing the lateral sinus, was removed from the skull of a man who had received the kick of a horse and was suffering from the signs and symptoms of a fracture through the base of the skull. This fragment was removed and the patient made a perfect recovery. This case should teach us to never despair even if the fracture was through the base of the skull.

A NEW OPERATING TABLE.

Dr. Schemelleck exhibited a new operating table, the chief features of which being its extreme cheapness and the ease with which it could be handled.

READING OF PAPERS.

Dr. C. W. Hitchcock read a paper entitled "Ununited Fractures." (See page 151.)

Dr. H. O. Walker: It is difficult in these cases to lay down any fast and firm line between delayed union and ununited fractures. Many months should be allowed to elapse before we make up our mind. In many of these cases there is a capsule thrown out around the fragments and a fluid resembling senovial fluid is secreted. This constitutes a false joint. I do not think that Dr. Hitchcock's case is one of ununited fracture, because it did finally unite, although in a vicious manner. If the transplantation of bone in a manner recently described by Dr. McGraw before this society had been resorted to the result might have been better. All these cases should do well if properly handled.

Dr. F. W. Robbins: No general laws can be laid down for the treatment of these cases. Each case should be treated individually. Three-fourths of an inch shortening is not inconsistent with a good result. I am glad to hear Dr. Walker say what he does about the length of time. We should take at least a year before we call any case one of non-union. The two cases reported were pathologically very different conditions. Internal medications should not be forgotten. Calcium salts and cod-liver oil, together with massage, are of value. The lower extremity is much more easily handled than the upper.

Dr. H. O. Walker: We expect that we will get a fibrous union from fractures of the neck of the femur, but I think that we are at fault here, for if they are properly treated we should get as good results as in any other part of the bone. Dr. Senn reports a good many successful cases treated with plaster-cast, screw and cushion over the trochanter, etc., and I have obtained myself what I think a fair bony union. In many cases, of course, we do not get such a good result, but we should always make the effort. Internal medication should not be lost sight of.

Dr. Alonzo Bryan: The only case of ununited fracture or delayed union which has come under my observation was an intracapsular fracture of the neck of the femur of a man one hundred and seven years old. No treatment was employed and no union secured.

Dr. T. A. McGraw: Delayed, or non-union is only a question of word. It does not amount to a row of pins. In a case I saw some years ago with Dr. Farrand the bones were rounded off but there was no capsule or false joint. It was just the same in another case of fracture of the humerus in which muscular tissue found its way between the bones. In almost all these cases there is a constitutional dyscrasia, a lack of the power to form new bone. I would differ with Dr. Walker very materially as to the fracture of the neck of the femur. In years gone by these non-union cases were the cause of many malpractice suits. The experience of all surgeons is that there are many cases that will remain ununited in spite of all that is done. Some will, however, unexpectedly unite. The same may be said of fracture of the patella. I will try the transplantation of bone in the next case of fractured patella that falls under my notice. The case to which **Dr. Walker** refers is one in which I used pounded up rabbit's bone and I showed it to this society. I was much interested in **Dr. Hitchcock**'s paper, and I do not know that any one could have obtained any better results. No man of to-day has done so much for ununited fractures as the old surgeons, because they devoted a great deal of time to the subject.

Dr John L. Irwin: The absence of a rich blood supply around the head and neck of the femur may possibly account for the non-union in this locality.

Dr. H. O. Walker: I differ with **Dr. McGraw** in what he says about fractures of the neck of the femur. I do not think that the older surgeons did as good work as **Dr. Senn** is doing to-day. Many of these old surgeons did good work I admit, but I think we can do better. I admit that in some cases these fractures will not unite even after our best efforts.

Dr. F. W. Robbins: If the fracture is extracapsular the circulation is better and the fracture will unite quicker and more permanently than if the fracture is intracapsular or if the capsule itself is broken.

Dr. C. W. Hitchcock: I purposely omitted in my paper any mention of constitutional treatment, but I recognize its great value in all these cases. Delayed union and non-union, are, in my opinion, valuable terms, and enable us to classify our cases to advantage.

Dr. T. A. McGraw: You would have to base your classification rather upon the pathological conditions present than upon the time.

Don. M. Campbell, M. D., Secretary.

STATED MEETING, FEBRUARY 6, 1893.

The President, FREDERICK W. MANN, M. D., in the Chair.

PATHOLOGICAL SPECIMENS.

Dr. T. A. McGraw: Two weeks ago to-night I presented to this society part of a thyroid gland which had been removed from an elderly lady in whom the growth had begun to interfere seriously with the respiratory function. This patient has made a good recovery,—the wound healing kindly with all the distressing symptoms removed. The only symptom now which troubles her being a continual collection of mucus in the throat. To-night I bring before you a patient who presents an enlargement of the thyroid which is variable, coming and going, getting larger and then smaller—so the history which he gives would indicate. In Chicago some time ago he was put under some form of treatment and seemed to do well and get better. The heart action is weak and irritable, his voice thick, and his intellectual acts not as prompt as they should be. There is also a cardiac murmur which is probably anæmic. There are other signs too, which, perhaps, point to a beginning myxœdema. He has been recently under the influence of digitalis and ergot and I will place him upon a diet of thyroid gland. We may have to remove part of this enlarged gland later on to relieve the pressure on important structures.

Dr. F. B. Tibbals exhibited a tumor removed from the occipital region of a patient sixteen years of age, the subject of spinal bifida. The tumor was removed without any difficulty and was found to contain some fluid. Nature had dealt with the spinal bifida by the formation of cicatricial tissue.

Dr. J. H. Carstens: What is the function of the thyroid gland?

Dr. Duffield: What good do you expect from your diet of thyroid gland?

Dr. T. A. McGraw: No man really knows what are the functions of the thyroid gland. Surgeons as late as 1872 supposed it had no function whatever and removed it entire. Later on, however, it was found that the removal of the whole gland was followed by myxœdema. Some think that the gland adds or takes up something from the blood, and it is with the former theory in view that the thyroid gland is given as a diet. It is plain to everybody that the thyroid gland has a function, and that this function is an important one, but just what that function is, is hard to say. All our efforts at treatment in these cases are empirical.

READING OF PAPERS.

Dr. Alonzo Bryan read a paper entitled "An Inquiry into the Causes of the Mortality of Diphtheria, and Some Suggestions with Reference to the Treatment of Diphtheria." (See page 156.)

Dr. E. L. Shurly: I differ with Dr. Bryan very materially on many points. I do not quite understand his pathology. We do know that a germ is planted upon these tissues and produces a toxic agent, which when injected into the lower animals reproduces the same pathological changes. Sometimes this toxic element is generated quickly and soon overcomes the patient. In his paper the Doctor is mixing up the toxic agents with those of the therapeutic agents employed. Epidemics run in cycles. Some are malignant, and some are mild, others very malignant. If certain toxic doses of this agent be injected into an animal, that animal will take enormous doses of alcohol. These results have been obtained by experiments carried on in laboratories, and usually upon perfectly healthy animals, and should not be given too much weight as against the clinical experience of the whole world. This poison often has selective action on the nervous system, depressing it in many cases to an enormous degree and in these cases it would be folly for the medical profession to reject *in toto* the administration of alcohol or stimulating foods in this class of cases. Concentrated food is good if it can be absorbed, but all the functions are in abeyance in this disease and it is doubtful if absorption and assimilation will go on to any considerable extent. It is in such cases as these that the administration of some such diffusible stimulant as alcohol finds its chief value. It is a well-known fact that the toxic element of diphtheria does, in itself, produce diseases of the kidney, and this fact must not be forgotten in our consideration of the question whether or not alcohol administered in these cases is to be held accountable for the occurrence of renal complications. In the case cited from the books on toxicology the full toxic dose of the drug was administered to individuals already debilitated from excesses of different kinds. It is very doubtful if the bichloride of mercury has any antiseptic effect on the blood but in physiological doses it does not produce the effects which Dr. Bryan has ascribed to it. If an intubation or a tracheotomy is to be done it should be done early. The paralyses are sequential and we do not have them at the height of the disease. After the fight is over the secondary poisioning comes on and we have the paralysis. Some believe that this paralysis is due to peripheral neuritis. I do not think that either alcohol or the bichloride of mercury should be eliminated from our list of remedies in this disease.

Dr. John L. Irwin: It does seem to me that we should be very careful to select our food. Is there any other food which we have that is so easily eliminated and used?

Dr. Anderson: It has been found in fifty-four cases examined by the microscope that diphtheria is due to one organism, or that there are several organisms found. In these cases in which the specific germ is found, the mortality has been found to be forty-five per cent., in others five per cent. I do not believe the bichloride is a specific in diphtheria, nor do I believe, in physiological doses, that it does any harm.

Dr. J. B. Newman: I did not know that the bichloride of mercury was ever used in diphtheria. I do not see how any man could use it. Perhaps it could be used to advantage as a spray but I would not recommend it internally because this is a prostrating disease due to the ptomaines acting on the nerve centers and the bichloride would not have a good effect in such cases. I have always looked upon alcohol, especially brandy, as being of great value, because it is an easy, diffusible stimulant. I have used it also as a spray and consider it one of the best of disinfectants. Alcohol takes the patient over many an emergency and I would therefore hesitate long before discarding it from my list of remedies.

Dr. Lapseley: The treatment of diphtheria at Harper hospital is carried on very much the same as in private practice. In no instance do I remember a patient receiving two or three ounces of alcohol in two hours as Dr. Bryan has stated, and in but few was the bichloride exhibited.

Dr. J. H. Carstens: Dr. Bryan is a little strong. The experience of all physicians is that alcohol is a good and safe stimulant, often taking the patient over the dangerous emergency. Dr. Bryan has cited extreme cases. Who has ever seen any such dire results as he has portrayed from the exhibition of mercury? My results used to be better, when I employed small doses of mercury than when that remedy was not employed. If Dr. Bryan expects us to profit by his assertions he should give us an exact record of what he has done.

Dr. Bigg: My views are not in sympathy with those expressed in Dr. Bryan's paper. First, because, while tearing down with a ruthless hand a tried system of therapy, he offers us no equivalent of value by which to replace it. Secondly, for the additional reason that my own experience with the drugs he condemns has so often been marked by happy results that I feel bound to defend them from so sweeping an indictment as the Doctor has brought against them. Doubtless, when used without that caution which should always characterize the employment of powerful and active medicaments, unpleasant effects are liable to follow, but, in judicious hands, the certainty of action of the mercurials, and the ease with which they may be administered, commend them as invaluable agents in the treatment of diphtheria. As to alcohol, there is not the slightest doubt of its antidotal power when employed against the toxic influence of this disease, the measure of its usefulness being limited only by its capability of substituting its own peculiar influence for the lethal influence of the diphtheritic virus.

Dr. Alonzo Bryan: If we have nothing but fraud to remove we do not wish to supply its place with another fraud. Differences of epidemics are differences in the treatment rather than in the disease itself. In my last twelve cases I lost but one.

Don. M. Campbell, M. D., Secretary.

STATED MEETING, FEBRUARY 20, 1893.

THE PRESIDENT, FREDERICK W. MANN, M. D., IN THE CHAIR.

READING OF PAPERS.

A PAPER was read by DR. T. K. HOLMES, of Chatham, Ontario, entitled "The Nature of Fever, with Some Remarks on the Management of Some Febrile Diseases. (See page 145.)

DR. C. G. JENNINGS: I have been much entertained and instructed by the paper, which is scientific. The theory that nerve-force can be transformed into heat without the intervention of tissue changes is untenable. Muscular and glandular tissue are the great heat-producing tissues of the body. Eighty per cent. of the heat is supposed to be developed in the muscles. The theoretical heat-developing center is not definitely located. Disturbances of temperature are usually in the direction of an elevation, therefore the nervous element is probably an inhibitory one. The nerve centers which are inhibitory may be influenced first, by influences from higher centers; second, by the influence of something circulating in the blood; third, from peripheral irritation. A cold bath influences chiefly heat abstraction, and I am in the habit of following it up by a chemical antipyretic which affects the heat production. The chemical antipyretics are also analgesic, and soothe the abnormal irritability of the periphery and put an end to the irritable impulses which are being sent into the third centers. I would not like to give up these chemical antipyretics, especially in short, sharp acute attacks, for in these I consider them valuable. In addition to the febrile diseases, convulsions of children and acute diarrhœas are favorably affected by cold baths.

DR. SAMSON: DR. HOLMES is a great authority, and well thought of in his own country. Chemical antipyretics undoubtedly have their place in therapeutics, but their use should be limited to that class of acute cases which have been described to-night by DR. JENNINGS, and if indiscriminately used they undoubtedly do a great deal of harm. In typhoid fever chemical antipyretics are of no value whatever, but in sharp, short attacks of fever they may be used to advantage. Hot and cold water have other important applications besides in the treatment of fevers; for instance, the alternate use of hot and cold water in the restoration of the newborn is of great value, but one of the greatest applications of hot water is in threatened death from chloroform, and I always feel perfectly safe in the administration of the anæsthetic if I have a good supply of hot water at hand. In a case of threatened death by chloroform the thorough application of hot water to the cardiac region will almost always prevent a fatal termination.

DR. CARL BONNING: I agree with DR. HOLMES, and I cannot see why the profession as a whole does not quickly accept the use of these cold baths in the treatment of fevers, especially since such brilliant results have followed their use. In all febrile cases I use cold baths and have good results. The larger hospitals are all using them and their results are usually good.

DR. J. B. NEWMAN: My experience with the cold bath has been rather unfortunate. I have used it in a case of scarlet fever and in a case of convulsions, both of which died. The prejudice which people have of putting a febrile patient into a cold bath operates strongly againt its general adoption.

DR. HOLMES: I agree with DR. JENNINGS in the use of antipyretics in short, sharp, acute cases. **Dr. Newman's** cases were very unfortunate. Public opinion should not divert us from using what we think is the proper line of treatment. We should have the courage of our convictions to carry them out to their logical conclusions.

EXHIBITION OF PATIENTS.

Dr. Jennings exhibited a patient suffering from syphilitic laryngeal stenosis. The patient had been wearing a large-size intubation tube for six weeks, and she now seems to be doing well. Don. M. Campbell, M. D., Secretary.

CORRESPONDENCE.

"SPURIOUS LABOR."

Editor of The Physician and Surgeon: I wish to correct, through your columns, some statements made by Dr. J. M. Sligh, of Granite, Montana, in his article on "Spurious Pregnancy and Spurious Labor," appearing in your February number. I do not wish to weary your readers by a repetition of the mistakes of men of high professional standing in order that they may think more favorably of me, but will proceed to state the facts of the case.

The Doctor's case, in his absence, fell into my hands, and, as all the neighbors knew the patient's condition, they were anxious to know the outcome. In this way her real condition became known, and when the Doctor returned he also learned of her real condition to his great mortification, and he now tries to justify himself through the mistakes of others and by ridiculing me. I will first give you the history as I obtained it from the patient and nurse.

Mrs. B. is a multipara. She supposed herself to be pregnant and was under the care of Doctor J. M. Sligh. Had had several periods of flowing, but none that alarmed her, until the time the Doctor records. The last time the Doctor was summoned Mrs. B. was alarmed about her condition, as she thought she was about to miscarry; so she sent for him in great haste. He came, made an examination, and pronounced her case one of placenta prævia, telling Mrs. B. that she would have to be delivered at once, or she might have serious trouble. This alarmed Mrs. B., she being of a nervous temperament. It also alarmed her husband and he sent for the priest. The Doctor proceeded to dilate the cervix, and, giving medicine to produce pains, went to bed. About this time the priest arrived and learned her condition and what had been done. He forbade anything further being done, and, having more influence than the Doctor, his counsel prevailed. Mrs. B. did not miscarry as the Doctor had predicted; the flowing ceased and she improved.

After Dr. Sligh had gone east, Mrs. B. came under my care with a history as above recorded.

Putting confidence in Doctor Sligh's diagnosis, he having made a thorough examination and dilated the cervix, I advised Mrs. B. to come to Phillipsburg and be confined, which she did. She felt well for about two weeks, when, becoming uneasy, she sent for me; and, as I had to go about fifteen miles into the country, I told Mrs. B. I had better make an examination and see if labor was about to begin. Still placing full confidence in Dr. Sligh's examination, I introduced my index finger in the vagina and met a rigid os. I made no further examination, but told Mrs. B. she would have to wait awhile. About a week or ten days later I was again summoned to attend Mrs. B. in labor. Pains had begun. I responded to the call, went through my usual preparations for such cases, and proceeded to examine with my index finger in the vagina and my other hand on the abdomen. I found the uterus high in the pelvis, os rigid, abdominal walls tense, but was able to map out to my own satisfaction a normal, non-pregnant uterus. I then told Mrs. B. that she was not pregnant, but that I wished to sound the uterus to prove to myself that it was not above normal size. I did so, finding a uterus two and one-half inches long.

I prescribed for the case with a view to re-establish the menses. I saw the patient a few weeks later, when she told me that she had menstruated and was feeling pretty well. After this I lost track of the case.

The Doctor says that he brings these facts to your notice, not in applause of his own acute powers of diagnosis. Any physician with the experience which Dr. Sligh claims to have had, who would dilate a normal, non-pregnant uterus, and try to expel a seven-months' fœtus from the same, would find it to his benefit to spend a term in some good lying-in hospital under a competent accoucheur, before encountering further cases of spurious pregnancy.

In regard to the smart doctor to whom Dr. Sligh refers, "whose want of experience is only equalled by his want of knowledge," I will say to the readers of The Physician and Surgeon that he has confined several hundred women and has treated four cases of spurious pregnancy, but has never attempted to produce a miscarriage in an unimpregnated uterus. Yours, etc., T. G. Heine, M. D.

Phillipsburg, Montana.

EDITORIAL ARTICLES.

PANCREAS DIABETES.

Important and interesting physiological experiments have recently been conducted by Mering and Minkouski in reference to the effects produced by excision of the pancreas and replantations of a portion of it in different parts of the body. The researches of these observers have demonstrated that complete excision of the pancreas invariably results in producing a fatal diabetes. Minkouski has also found that if a piece of pancreas be grafted under the skin of the abdomen of the animal experimented upon, the course of the diabetes was so modified that it no longer became a fatal malady.

These observations have been confirmed by Hédon in an ingenious way. If in the dog a part of the pancreas be excised, and the remainder, with its nerves and blood-vessels, be detached from all intestinal connection, and grafted under the skin of the abdomen no diabetes occurs. The vascular connections may be severed, still, no diabetes ensues. If, however, this graft which is outside the abdominal cavity be removed, or undergo atrophy, then glycosuria reappears. The graft being external to the peritoneal cavity evidently no pancreatic secretion reaches the intestinal tract, yet the graft continues to secrete a modified pancreatic juice, and this it is presumed, while not reaching the intestine, finds its way into the blood and there exercises its glycolytic properties.

The inference therefore from these facts is, that the pancreas forms some substance whose function in the blood is the destruction of the sugar of the body, and that this function is fulfilled by pancreatic tissue, even if dissociated from the pancreatic duct. The retention of a small part of pancreas under the skin exercises the same ameliorating effect as that performed by implanted thyroid tissue in myxœdema. The implication being that both these glands fortify the blood with an internal secretion, without which grave pathological conditions ensue.

The therapeutical deductions from these facts are obvious. The future treatment of diabetes may possibly be a surgical one, or it may take some such turn as is indicated by the experiments of PROFESSOR CAPARELLI, of Catania, which show that feeding dogs a puree of fresh pancreas greatly reduces glycosuria.

The fact that a pancreas diabetes exists seems substantially proved, and this fact will doubtless furnish sufficient stimulus for a full exercise of therapeutical ingenuity.

THE CHOLERA MICROBE.

THE cholera microbe will continue, at least during the World's fair, to be an object of a keen human interest. This being so, the recent remarkable onslaught made by DR. KLEIN upon HAFFKINE's methods of inducing cholera immunity, will receive considerable attention from all interested in this important topic. HAFFKINE, working on the hypothesis of KOCH's vibrio being the specific cause of cholera, aimed at increasing the virulence of the microbe by intraperitoneal transmission through guinea-pigs. He thus obtained a "virus fort" of extreme toxicity. If, however, the "virus fort" be attenuated by the addition of phenol, the animals innoculated with this attenuation prove refractory, according to HAFFKINE, to hypodermic injections of the "virus fort." HAFFKINE, it will be observed, by availing himself of the bacteria themselves, used the actual chemical substances of the organisms, or in his words the "intracellular poison," finding in this the protective or immunizing principle.

DR. KLEIN, in a series of experiments, has shown that by scraping the cultures of various microbes from agar-sugar—such microbes as the bacillus coli, proteus vulgaris and bacillus prodigiosus—and by injecting these into the peritoneal cavity, death from peritonitis occurs in the same way as by the "virus fort" of cholera vibrios, and further, that by sterilized injections of these chemical substances or "intracellular poisons," the animal could be immunized against the infection of the "virus fort." In other words, immunity is conferred by changeable bodies against a common protoplasmic poison, and it is against this poison the "virus fort" protects and not against the specific toxines generated by different microbes.

The criticism is a very important one and if sustained will call for a revision of existing opinion upon this subject.

EDITORIAL BREVITIES.

THE SANITARY OUTLOOK IN CHICAGO.

THE commissioner, sent out by certain representatives of the British medical press to report upon the sanitary condition of Chicago, has not sent home a very favorable document. However, there is good reason to believe the changes in the water intake, which have now been accomplished will make Chicago among the healthiest of American cities. The mortality for 1892 was only eighteen and two-tenths per thousand, and this compares favorably with the mortality of other cities. The four-mile tunnel which conducts water from the lake was only completed last November, and its effect on the prevalence of zymotic disease has been very marked. There is every reason to believe that the enterprising people of Chicago will not be found wanting in any sanitary precaution necessary for the protection of the city's prospective visitors.

A DEATH DUE TO ETHER.

THE death of Colonel Elliot F. Shepard, with symptoms indicating an ether toxæmia, is to be regretted, as all such accidents are, on account of the distrust they create in the public mind in regard to the safety of anæsthetics. At the same time many of the friends of chloroform will find in this unfortunate occurrence a confirmation of their claim that, while chloroform fatalities are recognized at once as such, few realize just how many deaths are due to the action of ether at some period after the operation.

ISOPATHY.

ISOPATHY, according to the *American Therapist*, is based on the doctrine that "all infectious diseases contain in their infectious matters the remedies capable of curing themselves." This is an old doctrine more or less taught by the ancients. The progress of bacteriological research and the therapeutical practices based upon these researches would indicate that possibly isopathy may have a place in the therapeutics of the future.

MEDICAL NEWS.

CHOLERA is still present in Hamburg.

TYPHUS fever is still reported in New York.

KANSAS CITY has twenty-eight laparotomists.

THE Baltimore medical college has opened a new building.

NEW ORLEANS has a hospital owned and controlled by physicians.

ATLANTA medical college recently graduated a class of seventy-four.

THE *Brooklyn Medical Journal* suggests the formation of a medical cycling club.

THE state of Washington has prohibited the use of cigarettes within state limits.

A DISPENSARY conducted by women exclusively has been established in Baltimore.

DR. W. B. SPRAGUE, of Detroit, was recently married to Miss Rose E. Wright, of that city.

THE quack electrician will be excluded from plying his nefarious business at the World's fair.

THE American association of genito-urinary surgeons will hold its seventh annual meeting in Harrowgate, Tennessee, on June 20 and 21.

THE Cincinnati academy of medicine held its annual banquet on Saturday evening, March 18.

DR. C. STEWART GRAFTON, thirty-two years of age, recently died of phthisis at Dundas, Canada.

THE Hawaiian leper settlement contained one thousand one hundred and fifteen lepers on April 1.

DR. S. V. CLEVENGER, of Chicago, has been appointed superintendent of the Kankakee insane asylum.

THE American association of physicians and surgeons will hold their third congress in Washington in May.

THE American climatological association will hold its tenth annual meeting in Philadelphia, May 25, 26 and 27.

THE physicians of Rutland, Vermont, have decided to raise the price of their calls from one dollar to two dollars.

MIAMI medical college graduated twenty-eight at its annual commencement exercises in Cincinnati on March 30.

THE Atlanta polyclinic is a new school for post-graduate instruction in the south. It began operations March 15.

THE Missouri state medical association will convene at Sedalia, on May 16, and continue its session for three days.

SYMPHYSEOTOMY has been performed on a man in France who underwent an operation for epithelioma of the bladder.

THE medical profession is represented in the present board of education of Brooklyn, New York, by four physicians.

CHLORALOSE is the latest hypnotic. It is "a substance resulting from the action of anhydrous chloral upon glucose."

THE Kentucky state medical society will convene its thirty-eighth annual meeting at Frankfort on Wednesday, May 10.

THE supreme court of Nebraska will be asked to render a decision in the case of a Christian scientist indicted for illegal practice.

THE Beaumont hospital medical college, of Saint Louis, graduated a class of thirty-one at its annual commencement held March 16.

TEXAS presents a record of two thousand cases of small-pox during 1892, with a mortality of twenty-four and six-tenths per cent.

SEPTICÆMIA caused the death, on March 14, of Dr. Charles Pratt Strong, a prominent surgeon of Boston. He was thirty-eight years of age.

ONE of the items of the Panama expenses was one hundred and twenty thousand dollars for cathartics. Evidently purging was required.

DEGREES were conferred on fifty-five graduates at the commencement exercises of the Missouri medical college, of Saint Louis, on March 27.

A STRANGE epidemic is said to be raging in southwestern Russia. The character of it is unrecognized, but it is killing thousands of people in the trans-Caspian region.

DR. A. J. C. SKENE has been elected president of the Long Island college hospital, and Dr. J. S. Wright likewise was elevated to the position of dean of the same institution.

A STATUE OF PROFESSOR GROSS.—Nine thousand dollars have been paid into the Gross memorial fund. About three thousand dollars more are needed to complete the fund.

THE late Mr. A. A. Low, of Brooklyn, New York, left a bequest of ten thousand dollars to the Brooklyn hospital. He was the father of Seth Low, president of Columbia college.

THE Massachusetts surgical and gynecological society has a woman president, Dr. Sarah E. Sherman, of Salem, having been recently elected to that position. All the other officers are men.

THE Texas medical college offers cheap medical education. The regents have abolished all fees, and now offer a three years' course of instruction for the matriculation fee of thirty dollars.

DR. WM. HINGSTON, professor of surgery in Laval university, Montreal, recently visited Detroit and made an intensely interesting address before the Detroit medical and library association.

THE association of American medical editors will hold its eleventh annual meeting in Milwaukee on June 5. Mr. Ernest Hart, the editor of the *British Medical Journal*, will deliver an address.

DR. S. E. HUDSON has purchased a half interest in *Daniel's Texas Medical Journal*, and assumes the position of managing editor. We congratulate the doctor on his accession to the editorial tripod.

A COMMITTEE BILL making an appropriation of five hundred thousand dollars to build a hospital for the pauper insane has been agreed upon by the Illinois senate committee on state charitable institutions.

OMAHA has amended its city charter and now gives the board of health a levy of one mill on the assessed valuation of city property. This will net the board a working fund of twenty-two thousand dollars.

M. HIPPOLYTE ADOLPH TAINE, the well-known French critic, died March 5 from diabetes. About a week before he died he was treated with testicular juice. He improved for a while rapidly, but a relapse occurred and he died.

THROUGH the liberality of Dr. George Duffield and his mother and brother, of Detroit, the nurses in the contagious-disease hospital will have separate quarters in a commodious new building to be erected on Harper hospital grounds.

LAVAL UNIVERSITY.—The medical faculty of this institution have been enriched by a gift from the Sulpitians of a piece of ground valued at thirty thousand dollars and seventy-four thousand dollars in cash. A new school will be erected which will equal any in Canada.

THE new building of the Buffalo university medical college was dedicated on the evening of March 6, with appropriate ceremonies. It is conceded to be one of the best medical college buildings in the country.

THE American association of obstetricians and gynecologists will convene its sixth annual meeting in Detroit, on Thursday, June 1, and continue in session three days. Dr. Lewis S. McMurty, of Louisville, is president.

THE Wisconsin state medical society will meet in Milwaukee, in May, at which time arrangements will be perfected for entertaining the American medical association which will convene in that city the following month.

A SNAKE LABORATORY is to be established in Calcutta. It is designed for the study, under strictly scientific conditions, of snake poisons and cures for snake bites, and will be the first institution for the purpose in the world.

THE Philadelphia board of health has asked the city authorities for one hundred thousand dollars to be expended in guarding against cholera. One-half of this amount would be reserved until the appearance of the disease.

THE degree of doctor of medicine was conferred upon seventy-four applicants at the commencement exercises of the Marion Sims medical college of Saint Louis, which were held on the 23d ultimo. Dr. I. N. Love delivered the valedictory address.

HOTEL DOCTORS.—There is, says the *Medical Record*, a fashionable hostelry in New York, where the doctor charges seven dollars a visit. Two of these go to the landlord. It seems to be a rule in New York for hotel proprietors to tax the fees of the doctor.

THE Chicago medico-legal society has taken action looking to the abolition of the jury trial in insanity cases. A bill has been prepared by this organization which contemplates the substitution of a commission of medical men whose report in these cases shall be accepted as final.

THE erection of a life-size bronze statue of the late Professor Samuel D. Gross has been undertaken by the alumni association of the Jefferson medical college. About nine thousand dollars has already been raised for the purpose, only three thousand dollars being necessary to complete the required fund.

THE Minnesota medical society is endeavoring to have an act passed by the legislature that will regulate medical experts in that state. The bill empowers the judge to select the expert in all medical, mechanical, and scientific questions, and provides for the payment of said expert as a witness for the state.

THE WAYNE COUNTY ASYLUM.—The superintendents of the poor for the county of Wayne have appointed the following to act as a consultative board to the asylum for the insane: Dr. David Inglis, neurologist; Dr. H. O. Walker, surgeon; Dr. J. H. Carstens, gynæcologist, and Dr. D. M. Campbell, oculist.

THE British register of duly qualified medical practitioners contains the names of one hundred and forty women. Forty-six of these are practicing in London; twenty-five in the provinces; eight in Scotland; one in Ireland; thirty-three in India; and fourteen in other countries, including principally, China, Japan, Australia and Africa.

THE MICHIGAN STATE MEDICAL SOCIETY.—The annual meeting will take place at Muskegon, May 11 and 12. The railways offer a rate of a fare and one-third. The Occidental, the Lyman and the Ledon hotels offer satisfactory accommodations. The meeting promises to be one of the best in the history of the society.

THE Cincinnati academy of medicine has authorized its trustees to purchase, at a cost of twenty-four thousand dollars, a building for society purposes. The structure decided upon contains a large audience hall, capable of seating five hundred persons, and a number of smaller rooms suitable for committee and section work.

THE thirteenth annual meeting of the Ontario medical association has been postponed from the 7th and 8th to the 21st and 22nd of June. This change has been thought advisable because of the date of meeting on which the American medical association will convene at Milwaukee, and the National association of railway surgeons at Omaha.

DR. WALTER HAY recently died at Annapolis, Maryland. He left the following unique will: "In order to avoid any litigation after my death I publish this testament. I do not own, directly or indirectly, any estate or property of any kind or description whatever, nor do I owe any debt or obligation." The doctor formerly resided in Chicago.

THE Johns Hopkins medical school will be opened to students October 2, 1893. Men and women will be admitted on the same terms, namely, an ability to read French and German, and so much Latin as is required for professional use; preliminary training in the liberal arts, and especially in those branches of science like physics, chemistry, and biology. This school has an endowment independent of the university.

UNDER the new law for the regulation of medical practice in New York the school of rational medicine had eleven per cent. of its candidates rejected, while the schools of sectarian medicine demonstrated the utter inefficiency of their instruction by having fifty and sixty per cent. of candidates fail to meet the requirements. The examination for regulars, homœopaths, and eclectics was the same, except therapeutics.

THE management of Grady hospital, at Atlanta, will henceforth endeavor to prevent the publication in the daily press of wonderful operations done in that institution, as witness the following: *Resolved*, That no officer or employe of the Grady hospital shall give any information to the newspapers regarding the condition of patients, or the treatment of the same, or of any surgical operation performed by any surgeon in attendance at the hospital.

INTERNES COOK COUNTY HOSPITAL, CHICAGO.—The annual competitive examination for the positions of interne at this institution, one of the largest hospitals in this country, was recently conducted by thirty members of the regular medical staff. An examination of the records shows that of the thirty-one competitors twelve were students of Rush medical college, nine of the Northwestern university medical school (Chicago medical college), nine of the college of Physicians and Surgeons, and one of the Northwestern university Woman's medical school. Representatives of Rush medical college secured first, second, fifth, sixth and eighth (five) places; Chicago medical college, third and seventh (two) places;

college of Physicians and Surgeons, fourth (one) place. Interneships in this hospital are among the most valuable positions obtainable in this country, and as they are very earnestly competed for by the best students of the different medical schools in that city, the gentlemen securing positions are to be congratulated.

A BILL for the establishment of a state ice commission has been introduced into the New York legislature. It provides for three commissioners at an annual salary of three thousand dollars, and limits the expenses of the commission to forty thousand dollars a year. It is made a misdemeanor for any one to cut or sell any unclean ice, and prescribes that no ice shall be cut within five hundred feet from the outlet of any sewer or drain-pipe, or a like distance from any stable or manure dump.

THE MICHIGAN COLLEGE OF MEDICINE AND SURGERY.—Twenty-one students were graduated from this college at the annual commencement, March 25. A banquet at the Wayne hotel was given by the faculty. The following are the names of those newly qualified to practice: Miss Caroline Heath, Battle Creek; Mrs. M. C. Saunders, Detroit; C. H. Wells, Toledo; Julius Schoenith, Detroit; J. P. Fryer, Flint; H. Bobertz, Detroit; G. W. Fralich, F. Meloche, Ontario; A. Meloche, Michigan; G. B. M. Seger, Rome, Michigan; O. N. Rice, Fairport; S. Frank, Charles A. Bird, F. P. Leckner, Detroit; J. A. Patton, Chapin; J. E. Burgess, Drumbo, Ontario; L. M. Ryan, Chatham; J. O. Doying, Mason; Cain Parry, Brockway, Michigan; C. H. Artz, Lansing; W. E. Colbath, Adrian.

AT a meeting of the physicians of Grand Rapids, Michigan, held March 10, 1893, the following resolutions were adopted: WHEREAS, Dr. Charles Shepard, has gone to his final rest after a long, honorable and well-spent life, we have come together to give expression to our esteem for our venerable associate, whose death gives gloom to our feelings, while his memory excites in us the desire to be as deserving of the respect of friends; *therefore, be it resolved,* That the medical profession has lost an able, honorable and conscientious physician and surgeon, whose professional record is above reproach, whose honesty was unquestioned, whose simplicity and frankness were genuine. That the community has lost an ideal citizen, who has been identified with its interests for more than half a century, and who has filled positions of honor and trust with credit; and be it further *resolved,* That we express to the family and friends of the late Dr. Shepard, our admiration of his untiring zeal in all things pertaining to a worthy representation of the true physician, and our sympathy with them in their great trial and bereavement; and be it also *resolved,* That a copy of these resolutions be sent to the bereaved family and furnished to the state medical journals and to the local press. Committee: SAMUEL WOOSTER, M. D., JOHN BRADY, M. D., ARTHUR HAZLEWOOD, M. D.

WORLD'S FAIR ENTERTAINMENT.—At a meeting of the joint committee of the Chicago medical profession on World's fair entertainment, held at the Sherman house, November, 1892, the establishment of a bureau of information and service was delegated with approval and endorsement to Charles Truax, Greene & Company, the committee reserving to itself the duty of such social entertainment of visiting physicians during the continuance of the exposition as may seem desirable. This action was confirmed at the final meeting of the joint committee, February 25, 1893, and on application of the Practitioners' club and the South Side medical club, the matter of social entertainment was delegated to them, with full authority to act in the capacity of entertaining bodies, with the retention of the chairman and its American and foreign secretaries already appointed. Chairman, Dr. Charles Warrington Earle; American secretaries, Dr. Archibald Church, Dr. George Henry Cleveland, Dr. John C. Cook, Dr. J. C. Culbertson; British, Dr. Sanger Brown; German, Dr. F. C. Hotz; French, Dr. Fernand Henrotin; Spanish, Dr. E. J. Gardiner; Italian, Dr. A. Lagario; Swedish, Dr. K. Sandberg; Canadian, Dr. R. D. McArthur. The scope and duties of the above secretaries will be designated in the future. C. Warrington Earle, chairman.

Dr. P. P. Gilmartin, of Detroit, died of consumption at his late residence in that city, on April 1. He was born in Boston, June 29, 1839, educated at Laval university, Quebec, and graduated from Mount Saint Mary's college, Emmittsburgh, Maryland. He took a post-graduate course at Saint Charles' college, at the same place, and thence repaired to Harvard medical college, where he was graduated in 1862. His collegiate course was a distinguished one. While still a very young man he passed an examination for assistant surgeon in the United States navy, and was detailed to the monitor Osage, during the Red River expedition in 1863–4. He resigned this post on account of ill health, just two weeks before the Osage was blown up in Mobile bay, and accepted the chair of physics and chemistry at Notre Dame college, South Bend, Indiana, where he remained two years. He came to Detroit in 1866, being one of the founders of the old Detroit medical college, where he lectured on pathology and medical jurisprudence. He was physician to Saint Mary's hospital, to the House of Providence, and to the Michigan Retreat. He was also county and city physician at different times, and was often employed as an expert in insanity. He contributed to medical periodicals, his writings being uniformly marked by a thorough knowledge of the subject, combined with philosophic treatment. Dr. Gilmartin was distinguished as a boy, and added to his youthful acquirements a remarkable knowledge of music, being a noted soprano singer at the Boston cathedral during his teens. While he was at school several of his friends and classmates afterwards rose to distinguished positions, among the number being Cardinal Gibbons.

RECENT PUBLICATIONS.

REVIEWS.

HUMAN ANATOMY.*

The treatise on "Human Anatomy" just issued from the press of Messrs. Blakiston will be an event of interest to medical students. The first necessity, to the aspirant for a medical career is the possession of a complete and systematic manual of anatomy. The volume before us is admirable in every way. It is magnificently illustrated in different colors, and a specially valuable feature is the mode of describing the illustrations in the text which almost amounts to a demonstration. The different sections have been compiled by authors specially qualified for the duties they assume. The illustrations have all been cut on wood from drawings made by special artists. The reading matter is terse and forcible. The superfluous has been rigorously suppressed, histology and physiology are properly excluded, and anatomy pure and simple is taught.

The student searching for a manual with which to begin his medical studies should certainly consider the claims of this handsome volume before committing himself irrevocably to any particular standard text-book.

*A complete systematic treatise by various authors, including a special section on surgical and topographical anatomy. Edited by Henry Morris, M. A., M. B., London, lecturer on surgery in Middlesex hospital. Illustrated by seven hundred and ninety-one wood-cuts, two hundred and fourteen of which are in colors. Price $7.50. Cloth. One thousand two hundred and eighty-six pages. P. Blakiston, Sons & Company, Philadelphia.

THE HYGIENE OF THE SICK-ROOM.*

This little manual is the outcome of a series of lectures delivered before the university of Maryland training school for nurses, and deals with such subjects as asepsis, antisepsis, disinfection, immunity, heating and ventilation, and bacteriology, in a plain-spoken and homely way, with a view of imparting practical ideas regarding the nature of contagion and infection, and an understanding of some recent results of biological research. The book is carefully written, and will form an admirable manual to place in the hands of the students of training schools and others interested in the welfare of the afflicted.

*A book for nurses and others. By William Buckingham Canfield, A. M., M. D., lecturer on clinical medicine, university of Maryland. P. Blakiston, Son & Company, Philadelphia.

HYDROTHERAPY AT SARATOGA.*

This is a treatise on the mineral springs of Saratoga. It affords not only a scientific account of the celebrated springs which abound in this charming watering place, but also gives a large amount of information regarding mineral waters generally. The medicinal value of these healing waters is undoubtedly as great as those for which people make European voyages, and any effort to make them popular is praiseworthy. Dr. Irwin's little book will be found a practical guide to the rational employment of mineral water, either medicinally or balneologically.

*A treaties on natural mineral waters. By J. A. Irwin, M. A., Cambridge, New York, M. A., M. D., Dublin, etc. Cassell Publishing Company, New York.

THE YEAR-BOOK OF TREATMENT FOR 1893.*

Our old friend the year-book of treatment again claims our regard. As a consensus of all modern advances in the field of medicine it is admirable in every way. The individual reader is unable to keep abreast of modern progress unless he invoke the aid of some such manual as this, in which a corps of acknowledged leaders presents a judicious summary of the advances in their several specialties. The year-book will doubtless receive the patronage its established excellence has led it to expect.

*A critical review for practitioners of medicine and surgery. A series of contributions by twenty-two writers. In one 12mo volume of five hundred pages. Cloth, $1.50. Philadelphia: Lea Brothers & Company, 1893.

THE INTERNATIONAL MEDICAL ANNUAL.

E. B. TREAT, of New York City, has recently brought out the 1893 "International Medical Annual;" being the eleventh yearly issue of this extremely useful work. A glance at the prospectus gives promise that the 1893 issue is much better than any of its predecessors. There are thirty-eight distinguished specialists on its corps of editors, carefully selected from among the most eminent physicians and surgeons of America, England, and the Continent. It arranges in a practical way for ready-reference what is worth preserving of the year's medical literature, together with a number of important papers specially written; and also contains over six thousand references to diseases and their remedies; many illustrations in black and colors being used where helpful in explaining the text.

MEDICAL PROGRESS.

MEDICINE.

THE ORDEAL BY POISON.

THE latest news from Vienna is that Dr. Hasterlik and three other searchers after truth have been making experiments with the cholera bacillus, swallowing pure cultivations of that organism. It is reported that on December 19, 1892, Dr. Hasterlik took half a drop of a pure cholera culture, and on January 9, 1893, a whole drop; a second experimenter taking three-fourths of a cubic centimetre. "Both remained in good health." A third person who, we are told, was subject to attacks of diarrhœa, took a whole cubic centimetre. In thirty-six hours his temperature rose, and diarrhœa set in, but on the fifth day the patient had recovered. A fourth experimenter, the acid of whose stomach had been corrected by the exhibition of a one per cent. solution of soda, took one and one-half cubic centimetre of the bacillus emulsion. Seven days later he was seized with an attack of diarrhœa. "All the four persons are now in perfect health, although in each case the existence of bacilli was established." This is all very interesting, but does not advance our knowledge of the question very much. Neither Koch nor anyone else contends that the ingestion of the cholera bacillus must necessarily produce an attack of cholera. Klein and Bochefontaine have both tried this method of cholera production already, in both cases with negative results; and these fresh ingestions give us no further information. As Hueppe has pointed out in his recent work on cholera, even when the horrible Hamburg water, with its filth and bacilli, was taken by the residents, by the most liberal calculation not more than three per cent. of the population contracted cholera.

In these cases only were the conditions favorable to the production of the disease even when the bacillus was undoubtedly present. A number of others—probably a much larger percentage—suffered from an attack of diarrhœa; the rest remained entirely unaffected. We can gain no accurate information from such experiments made on people who must have a good deal of confidence in their alimentary tracts, unless a very large number can be induced to submit themselves to a prolonged series of ingestion experiments, whilst the alimentary canals of these patients are in various stages and conditions of disturbance.—*British Medical Journal.*

THERAPEUTICS.

THE USE OF HYPNOTISM AMONG THE INSANE.

Mr. George M. Robertson, having studied the subject with Bernheim, Luys and Voisin, has made use of hypnotism among the female pauper patients in the Morningside asylum. He finds that the insane are difficult to hypnotize, but by selecting the most sensible and reasonable of the patients, and of those who are excited, only those who are still coherent, success is likely to follow in between one-third and one-half of the cases, without spending, on an average, more than a quarter of an hour over each. He has a decided objection to melancholiacs, except of the simple variety, as their subjective consciousness is so strong, and they are so wrapped up in their morbid ideas that, instead of listening to suggestion and becoming hypnotized, they think all the more of their subjective ideas. Even with cases who can be hypnotized one's success varies greatly, and in an unexpected manner they refuse to become hypnotized. Although most of his patients have gone under fairly deeply, and had no recollection of what happened, still one's control over them is not so strong as over a sane person, for, as their intelligence is not so good, they do not, as a rule, take up suggestions so well, nor do these make so great and lasting an impression upon them. The hypnotic sleep is also much shorter, on account of the morbid excitement from within the brain, arousing the patient, just as in the state of health we may also be awakened out of a normal sleep by a vivid dream. He summarizes its uses as a direct therapeutic agent: (1) In insomnia, succeeding in intractable cases when drugs have not succeeded well. Hypnotic sleep, being more closely allied to healthy sleep than is drugged sleep, must be of great service when the brain nutrition is already bad and the additional effect of depressing drugs is undesirable. (2) As a sedative in excitement, of direct therapeutic value in preventing an outburst of excitement from passing into mania in a brain in a highly unstable condition. (3) To dispel fleeting delusional states and the minor psychoses by means of verbal suggestions in the hypnotic state, removing these lesser degrees of mental derangement. For the purposes of management it is useful: (1) To overcome the morbid resistance of patients for their own benefit, in making them do what is necessary for their own welfare, in the giving of medicines and the taking of food. (2) As a substitute for restraint in cases of excitement and violence, replacing the mechanical, physical, or chemical, by what may be described as mental restraint. It is, however, here uncertain, and not always possible. Naturally those who expect miracles to result from the employment of hypnotism will be disappointed. It is not believed that it can cure pronounced or advanced forms of mental disease, nor is the writer hopeful of its ever doing good in cases of fixed delusion. No person can reasonably deny the great good that it may do in individual cases, or the fact that in medical hands, legitimately employed with caution, it appears to produce no direct harm; yet even in an asylum, if extensively used, it may increase and strengthen the delusions about hypnotism, and about unseen agencies in general.—*Journal of Mental Disease.—American Journal of the Medical Sciences.*

THE IODIDE OF STRONTIUM.

DR. A. MALBEC presents a very complete study of this remedy which appears likely to obtain an assured position in therapeutics. It occurs crystallized in hexagonal tables, very soluble in water, and, when impure, readily decomposing into iodine and oxide of strontium, presenting various colors. Purity and stability are essential, as the iodate is toxic. As the potash salt, the iodide of strontium has a manifest action upon the heart, which can be utilized in affections of the myocardium, in changes at the aortic orifice and in the arteries. It certainly can be used as a substitute for the potash salt, although it may not always be preferred to it. Yet it does not, after prolonged usage, give rise so readily to intolerance, and it will be more readily accepted by a patient suffering from cardiac disease if he should know of the use of the potash salt as a specific for syphilis. It can be prescribed the same way as the potash salt, in the same dose in simple solution in distilled water, or to avoid the salty taste, in the sweet liqueurs, or in syrup, or that of bitter orange-peel.—*Les Nouveaux Remèdes.—American Journal of the Medical Sciences.*

REGIMEN IN DIABETES.

IN a critical review Letienne (*Arch. gén. de Med.*, February, 1892) says that, besides the diminished ingestion of substances convertible into sugar, the loss to nutrition consequent upon the withdrawal of such substances has to be counteracted. The great difficulty lies, as is well known, in the substitutes for bread. Aleurone bread, recommended by Ebstein (*Epitome*, June 11, 1892, paragraph 526) would appear to be one of the best. Soya bread is also well spoken of. Gluten bread cannot be made palatable without the addition of fecula. It is preferable steadily to reduce the amount of ordinary bread than at once to withdraw it altogether. Farinaceous vegetables are generally excluded, but there is some difference of opinion about potatoes. Perhaps it is better to allow a small quantity of the latter than to forbid them altogether. Green vegetables are accorded a secondary place in the dietetic treatment. Meat diet plays the most important part. An exclusive meat diet has been used, but it has great inconveniences, and is often badly borne. Grave forms of diabetes may be uninfluenced by it. In France it finds little favor. Fish forms a good change, and eggs may be allowed. Fats should supply the deficiency of the carbon element due to the withdrawal of the carbohydrates. The diminution in the amount of sugar brought about by Donkin's milk treatment is usually temporary, and some look with misgivings upon this treatment. Condiments are as a rule forbidden.

Glycerine has been used as a substitute for sugar; it may assist in regulating the bowels. Saccharin has fallen into disrepute. The simplest method is steadily to diminish the sugar supplied. Pure water is the best drink. Some white wines may be allowed, but no strong alcohol. Mineral waters surcharged with carbon dioxide are useful. The author naturally draws much attention to the question of the individuality of each patient. The treatment must vary according to the type of the disease, whether severe or mild. The effects of treatment must be ascertained by the amount of sugar excreted. Overwork, both mental and bodily, must be studiously avoided, but moderate exercise is good. Travelling and residence in certain health resorts may be useful. Diabetics are susceptible to cold. The functions of the skin should be cared for, but sweating, such as is produced by the vapor bath, may lead to grave symptoms. The case, however, is somewhat different in diabetes without wasting (*diabète gras*), in which warm hydrotherapeutical treatment may be useful.—*British Medical Journal.*

THE PREPARATION OF KUMYSS.

The following is taken from an article published in the February number of the *Therapeutic Gazette:*

"The original kumyss is the Russian, made from mare's milk, which is used for the obvious reason that it is less rich in casein and fatty matter than cow's milk, and therefore far more easy of digestion.

"Mare's milk contains approximately one and seventy one-hundredths per cent. of casein and one and forty one-hundredths per cent. of fatty matter, whereas cow's milk contains four and fifty-five one-hundredths of casein and three and seventy one-hundredths of fatty matter.

"Cow's milk is probably universally used in England, and it answers the purpose admirably in most instances, but a better preparation is obtained by diluting with water to reduce the percentage of casein, etc.

"Mare's milk contains eight and seventy-five one-hundredths of milk sugar, cow's milk only five and thirty-five one-hundredths; it is therefore necessary to add some of this to our preparation. The following formula answers very well. Take of—

Fresh milk,	℥xij.
Water,	℥iv.
Brown sugar,	ʒijss.
Compressed yeast,	gr. xxiv.
Milk sugar,	ʒiij.

"Dissolve the milk sugar in the water, add to the milk, rub the yeast and brown sugar down in a mortar with a little of the mixture, then strain into the other portion. Strong bottles are very essential, champagne bottles being frequently used, and the corks should fit very tightly; in fact, it is almost necessary to use a bottle machine for the purpose, and once the cork is properly fixed it should be wired down. Many failures have resulted because the corks did not fit properly, the result being that the carbonic-acid gas escaped as formed and left a worthless preparation. It is further necessary to keep the preparation at a moderate temperature, and, to insure the article being properly finished, the bottles are to be gently shaken each day for about ten minutes to prevent the clotting of the casein. It is as well to take the precaution of rolling a cloth round the bottle during the shaking process, as the amount of gas generated is great, and should the bottle be of thin glass or contain a flaw, it may give way. Some few days elapse before the fermentation passes into the acid stage, and when this has taken place the preparation is much thicker. It is now in the proper condition for allaying sickness, being retained by the stomach when almost everything else is rejected."

OBSTETRICS.

THE ANATOMICAL RESULTS OF SYMPHYSIOTOMY.

RECENT observations as to the increase in pelvic diameters following symphysiotomy have been made by **BIERMER**, of Breslau, who reports his results in the *Centralblatt für Gynäkologie*, 1892, Number LI. He severed the symphysis pubis in four pelves, one a patient not in the puerperal state, the remaining three women having perished soon after labor. The results as given in figures, and obtained by measuring these pelves after section had been done, are as follows:

When the symphysis separated one centimetre after incision, the antero-posterior diameter of the pelvic inlet was increased twenty-five-one-hundredths centimetre, the transverse diameter was increased seventy-five-one-hundredths centimetre, and the obliques fifty-one-hundredths centimetre.

When the symphysis pubis separated two centimetres, the antero-posterior diameter was increased twenty-five-one-hundredths centimetre, the transverse one centimetre, the obliques seventy-five-one-hundredths centimetre.

When the symphysis separated three centimetres, the antero-posterior was increased fifty-one-hundredths centimetre, the transverse one and one-half centimetres, and the obliques one and one-tenth centimetres.

When the symphysis separated four centimetres, the antero-posterior was enlarged sixty-five-one-hundredths centimetre, the transverse two centimetres, the obliques one and seventy-five-one-hundredths centimetres.

When the symphysis separated five centimetres, the antero-posterior diameter was enlarged eighty-three-one-hundredths centimetre, the transverse two and one-fourth centimetres, and the obliques two and one-fifth centimetres.

When the symphysis separated six centimetres, the antero-posterior was increased one and seven tenths centimetres, the transverse three centimetres, the obliques two and nine-tenths centimetres.

When the symphysis separated seven centimetres, the antero-posterior was increased one and four-tenths centimetres, the transverse three and one-tenth centimetres, and the obliques three and one-half centimetres.

When the patient was put in the lithotomy position and the symphysis pubis was incised, the two halves of the pubis separated spontaneously four centimetres. Motion could be distinctly appreciated in the right ilio-sacral joint.

When the pubic arch separated nine centimetres a cracking sound was heard in the right ilio-sacral joint, but on gentle pressure the joint completely closed. There was a separation, appreciable by the finger, of one and one-half centimetres.

When the two halves of the pubes were so stretched that the distance between them measured ten and one-half centimetres, a similar sound was heard at the left ilio-sacral joint. A visible separation measuring one and one-half centimetres was detected in that joint.—*American Journal of the Medical Sciences.*

MEDICAL MELANGE.

AN ECCENTRIC PHYSICIAN.—There has recently died, at Llantrissant, Dr. William Price, a member of the royal college of surgeons, at the age of ninety-two. His eccentricities for many years have been well known in Wales. He called himself the Arch-Druid of Wales, and would wear a whole fox-skin on his head, light green trousers trimmed with scarlet at the bottom and scalloped, a scarlet waistcoat, and a light cloak. One of his children he named Jesus Christ, and another one who died he cremated on the top of a hill. He was prosecuted in court for this latter action, but was acquitted, and apparently as an act of revenge, cremated all his dead cattle in the same public place. He has left strict orders in his will that his body should be cremated on this same hill.—*Boston Medical and Surgical Journal.*

USE OF THE ESMARCH BANDAGE IN SYMPHYSIOTOMY.—Törngren, of Helsingfors, reports (*Centralblatt für Gynäkologie*, 1892, Number XLIX) two interesting cases of symphysiotomy performed for contracted pelvis, terminating in the death of one of the mothers and the recovery of both children. The mother perished of fatty degeneration of the heart, pulmonary emphysema, and chronic nephritis, the immediate cause of death being paralysis of the heart. In both these cases the wide portion of the Esmarch bandage was employed to bring together the severed pubic joint with great convenience. Some hæmorrhage was observed after the operation, coming probably from cavernous tissue situated around the *ligamentum arcuatum.* In one of the cases this ligament was not divided by the knife, but it was found to have been torn asunder when the child was delivered with forceps.

ON IMMUNIZATION AND CURE IN EXPERIMENTAL DIPHTHERIA OF ANIMALS.—The investigations of Behring and Wernicke, as well as those of Kitasato, the distinguished Japanese experimenter, have given results in artificial immunization that are of the utmost interest, as opening a new field, and as having established an accuracy and certainty of results comparable only, as to scientific demonstration, to those which we obtain in the production of experimental rabies. It was discovered that in certain animals diphtheria and tetanus could be cured by the application of trichloride of iodine without necessarily killing the bacteria, and that by this means they could also be rendered immune against further attacks of the diseases. This was thought, of course, to be due not to a bactericidal effect, but to a neutralizing power exerted against them. By a series of beautifully conducted experiments, they have reached a point at which they can produce serum of immunized animals possessing well defined immunizing properties, and capable, for this reason, of being accurately dosed. They have recently experimented upon sheep, so as to obtain the serum in large quantities, and are about to make experiments upon man himself, which other investigators will pursue simultaneously, and which the medical world will await with the greatest interest.—*Therapeutical Review.*

THIOL IN THE TREATMENT OF BURNS.—Bidder (*Archiv fur Rhinishe Chirurgie*) says that in treating burns a dressing should be selected which has the following qualities: (1) Should not require frequent changing; (2) Relieve pain; (3) Act as a drying substance; (4) Harden the new skin; (5) Hinder the growth of micro-organisms which may have gained entrance to the wounded parts. The remedy which he has found to possess all these qualities is Thiol, which may be used in two forms, liquid and powder. In burns of the first and second degree, where the blebs are still intact, it is only necessary to brush the burned area with equal parts of liquid thiol and water and cover with wool. At the end of eight days the dressing should be changed, and again re-applied if the blebs have not healed. If the blebs have been ruptured and the corium exposed, all loose skin should be cut away and the burned area carefully cleaned; it should then be brushed with liquid thiol, and powdered with salicylic or boric acid and then with powdered thiol, and the whole covered with vaseline, cotton wool, and bandaged. As a rule, one or two dressings are necessary before the wound has healed.

THE BLOOD IN FEVER.—Dr. Stein, of Vienna, has made some experiments in the hope of solving the question of the origin of the blood-changes in fever. Are they due to the rise and fall of temperature, or to the action of medicines? The results of his studies are as follows: It has been demonstrated that the consistency of the blood is increased during fever and diminished during defervescence. After the use of antipyretics, it was discovered in many cases that the consistency of the blood was diminished. The ingestion of large quantities of fluid often causes a thinning of the blood, and the discharge of large quantities of fluid (as in diarrhœa) caused a thickening of the blood. The author also refers to experiments conducted during a period of two years on one hundred and sixty-eight persons with reference to the condition of the blood before and after defervescence, and to the condition of the blood before and after the administration of vaso-dilatory medicines to individuals free from fever (internally antipyrine, antifebrine, subcutaneously pilocarpine). In most cases there was found a change in the consistency of the blood. Elevation of temperature was found to be accompanied by an increase of the consistency of the blood, and spontaneous decline of temperature by a diminution of consistency. Artificial reduction of temperature was usually followed by the same decline of consistency. The results of the investigation of the effects of vaso-dilatory medicines on afebrile persons were not entirely satisfactory. In most instances it was found that with the beginning of vaso-dilatation there occurred a diminution of blood consistency.—*Centralblatt für klinische Medicin.*

MR. GLADSTONE'S SPEECH A PHYSICAL EFFORT.—We must, says the *Lancet*, leave to politicians the appraisement of Mr. Gladstone's speech on Monday, regarded as a piece of statesmanship, but regarded from a medical or physiological point of view, there can be no difference of opinion. The performance must be regarded, and must remain, not only as historical, but probably as unique in the history of eloquence and of states. Those who were privileged to be among the audience will never forget the scene or the speaker. In the crowded chamber, filled with all that was distinguished and influential in British society, his voice was heard for the first hour of the speech with perfect ease; and even when its physical force began to abate it was still felt as an influence altogether exquisite and refined. No difference of opinion could avail to save the listener from the spell of a voice always seconded by the choicest amenity of expression, which it may safely be said has no rival in contemporaneous parliaments. The wonder of all this is doubled by the fact that the speaker is in his eighty-fourth year. Though there was a perceptible falling off in the force and volume of voice as the second hour was reached, the animation of the orator was all intact. The most marvellous part of all was to see the orator, after he had resumed his seat, looking as serene as if nothing unusual had been done, and to learn that he went home to dine with his family and to sleep, with as little disturbance as if he had only been engaged in the most ordinary occupation.

THE MOST SOBER AND MERCIFUL OF SCIENCES.—The speech which Lord Salisbury delivered at Oxford, on Wednesday, was an event of some importance for several reasons. In the first place the mere fact that the chancellor of the university, who is also one of its most distinguished sons, had been asked to address a meeting in aid of the building fund of the Radcliffe infirmary, was an indication that the occasion was of university and educational character, and not one of only civic benevolence. In the second place, the speech which Lord Salisbury made brought into prominence this fact, that the university authorities now possess a desire to strengthen the hold which the "later sciences," the sciences which rely most upon observation, have recently exercised upon the intellect of man. The older science, whose chief food is gathered from reflection, "is slowly, very slowly, but still quite evidently, giving away to the sciences which rely upon observation." Lord Salisbury spoke sympathetic words of the science of medicine, which, he said, had scarcely received the tribute which it ought to receive among sciences which rest upon observation. "It is," he said, "the most sober, the most absolute, and the most positive of all sciences. . . . It is a curious coincidence and a curious fact that at this moment the whole tendency of scientific thought appears to be rapidly concentrating itself upon the fields in which medicine reigns supreme." For the generation to come he believed that the study of that department of scientific medicine which has to do with minute living organisms—that part, that is to say, which is almost entirely based on experimental research—will figure larger in the scientific field than any other study, and upon its progress "the lives of millions of human beings depend." Finally, that there might be no possibility of mistaking the drift of his speech, Lord Salisbury said that his audience, by supporting the fund for the rebuilding of the infirmary, would not only help to remove a disgrace from the county and the university, but would "let in another brick—another row of bricks—in that mighty edifice of intellectual supremacy and intellectual culture which has made Oxford famous."

COMMERCIAL MEMORANDA.

WEAK STOMACHS AND FASTIDIOUS PATIENTS.—As terraline is easily digested and is entirely tasteless, it can be administered indefinitely to the weakest stomach without creating a repugnance to its use, a most decided and important desideratum. Children and fastidious females take it readily, for it is without taste, is odorless, and it does not produce eructations. In terraline we have a product of purified petroleum, without the disagreeable taste and odor of crude petroleum, and yet with all the medical qualities fully preserved.

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

UPON THE VALUE OF SOME SURGICAL STATISTICS.*

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At the present time, when the aid of statistics is invoked with a good deal of emphasis to determine the efficacy of certain modes of treatment, it becomes pertinent to ask "What value may we place on general surgical statistics?" You will remember that this question was brought to your notice a short time ago in a discussion upon appendicitis, when a member of the society advocated strenuously the propriety of operating in all cases of that disorder in which operative procedures were not positively contra-indicated by conditions such as Bright's disease, cardiac insufficiency, and the like, which would render any operation peculiarly hazardous. It was then asserted that any other line of treatment was attended with a very large mortality, that the operation when made in the quiescent stage was almost without danger—less than two per cent. succumbing to its effects, and that the very best surgeons had now recognized these facts and had adopted this mode of procedure. It was also stated that this position could be established beyond all doubt by statistics, and it was then that I expressed my entire scepticism as to the value of the great mass of surgical statistics, much to the disgust of many who still held to the child-like faith that "figures cannot lie." On my table the next morning I found the *Medical Record*, of March 18, with a most interesting and valuable paper by Dr. W. T. Bull, entitled "Observations on Chronic Relapsing Appendicitis," containing, besides new and interesting records of cases, an additional batch of statistics, which, if accepted at their face value, would fully support the principles laid down by my antagonists in that memorable discussion. This new material came so apropos to the matter in hand, that I could not forbear subjecting it to criticism with the object of inducing, perhaps, a better understanding among us all as to the real worth of these medleys which some members of the profession delight in collecting with infinite labor from all sources, and which they dignify by the name "statistics."

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*Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

In doing this, I wish to state at the outset that I have the very highest regard for the author of the paper, whom I regard as one of the most accurate, skillful and painstaking of American surgeons, and the one of all others best qualified by thorough study and experience, to express a sound judgment on the questions in debate concerning perityphlitic inflammations.

The statistics which he accepts, however, and copies into his paper are not his own, except to a very small extent, but are collected from the reports of cases by no less than thirty-six surgeons. Of the seventy-six published operations, only one had a fatal result, making a mortality of only about one and three-tenths per cent. This is truly a most marvelous record, and, if those other statistics which Dr. Walker quoted are also correct, according to which twelve and one-half per cent. of all cases of appendicitis which are not treated by operation die, then is Dr. Walker more than justified in the judgment which he expressed, that each and every case of appendicitis should be operated on at the earliest possible moment, providing, of course, there were no positive contra-indications in the general condition of the patient. If we accept the premises there is no escape from the conclusion, and we must consider the surgeon guilty of malpractice, whenever he allows a patient with appendicitis to die without subjecting him early to the knife. But some men are born credulous and others are born sceptical, and nature classed me among the sceptics. When such positive and astounding conclusions are arrived at, I instinctively begin to doubt. I wish to know something more definitely about the data on which the dogma is based before I yield my judgment to that of another, however high his professional standing.

Let us study the history of the operation, as indicated in this paper, with the purpose of determining, if possible, approximately, the degree of hazard which accompanies it, and as the study of cases will often give us a more definite knowledge of a surgical subject than the study of figures, we will begin with the cases of Dr. Bull.

These, twelve in number, are given in a table by themselves, and although not described as minutely as we could wish, nevertheless give us some adequate idea of what the surgeon may expect who begins an operation of this kind. In all the twelve cases, in order to remove the appendix, the peritoneal cavity was opened, and the patient exposed to the dangers which always arise from that procedure. In one the condition of the appendix is not given. In eleven the surgeon encountered old inflammatory tissue. In only one of these, number nine, is this described as slight in amount. In ten the adhesions were dense and strong, and in four of these there was contained pus. In four cases the appendix was found with great difficulty; in only two, as far as can be determined from the description, was it found readily. For this reason, the operations were of necessity prolonged and difficult, and associated with much disturbance of the cæcum and its relations and much handling of the gut. As finding and extracting the appendix had to be done, for the most part, by touch without the aid of vision, this part of the operation must have equalled in difficulty that of removing the tubes and ovaries. In one case the adherent cæcum was torn and ruptured, requiring suture. This accident happened once to myself in a case of primary appendicitis of three weeks' duration and made necessary secondary operations for the resulting fecal fistula.

The results of these operations are worthy of careful study. One died of septic peritonitis; four others had mural abscesses. In other words, between forty-one and forty-two per cent. of operations for relapsing appendicitis, performed by one of the very best and most experienced surgeons in New York, with every antiseptic precaution, were followed by septic infection. What danger that indicates in abdominal surgery every one knows. If we compare the operations for relapsing appendicitis as described in Dr. Bull's paper, with the very similar operation for the removal of diseased tubes, we should estimate their hazards at nearly the same value. In appendicitis the danger of infection from abscess is perhaps somewhat greater than in removal of tubes for the following reasons: On removing pus tubes the surgeon leaves behind him a comparatively clean peritoneal surface which may be easily drained, while in appendicitis an abscess, if one exist, involves both peritoneum and cellular tissue, and every surgeon knows the difficulty of thoroughly cleaning and limiting abscesses in cellular tissue. If such abscesses communicate with the peritoneal cavity they are apt to cause general infection, a disaster which actually happened in one of Dr. Bull's cases. On the other hand, there is less danger of hæmorrhage in appendicitis—and judging the two operations from an *á priori* stand-point, I should be disposed to assign to them both about the same relative rates of mortality. Now, the very lowest ratio of mortality attained by the most expert surgeons in the removal of the tubes has been three per cent., and this only by one or two exceptional operators who had acquired marvelous skill through vast numbers of operations and many unpleasant experiences. It would, however, be absurd to speak of three or five, or even ten per cent., as representing the ratio of mortality in that operation. What it might be if all cases were reported, no one knows, but I do not, myself, believe that it would fall short of from ten to twenty per cent. Judging from the mortality of this operation, I should certainly not expect a less mortality in the operations for relapsing appendicitis than that of Dr. Bull, of one in twelve or between eight and nine per cent., and how much more it might be in the hands of less competent men, we may not even guess. But these "statistics" show that it is less than two per cent., and we are justified in raising the question how much weight we are to give to the mere *fact* that thirty-six surgeons have reported seventy-six operations for relapsing appendicitis with only one death. Are we to accept this table as conclusive in this matter? Are we to infer that it represents, even approximately, what has been done by the profession and take it forthwith for granted that it expresses pretty accurately the average mortality of such operations? Such results when compared with those of laparotomies for other causes are not only astonishing. They verge on the miraculous, for it must be considered that the figures represent the work not of one exceptional man, but of thirty-six men, from all over the world, no one of whom had operated upon more than twelve cases! If the record is complete and correct, there has been accomplished in this one new surgical procedure a success which is absolutely unique, for there is no other instance in which a great multitude of surgeons have, without any exception, a similar good fortune in any hitherto untried operation of equal gravity. It is simply incredible that in an entirely new operation, in which the peritoneal cavity is opened through a mass of indurated and infectious inflammatory tissue, in which the attachments of the cæcum are partially broken and the gut itself sometimes torn and the appendix tied and cut off, in which pus cavities are made to communicate with the cavity of the peritoneum, and in which the fingers have to do the work unguided by vision,—I say it is simply incredible, that all of the numerous surgeons who have ventured upon the first operations of this kind should have been able to accomplish the purpose with a combined mortality of less than two per cent. I cannot believe that it is the duty of surgeons who hope to see their art develop into a science to accept such statements without criticism. The same rules of evidence which govern men in other branches of science should govern us in surgery. Before accepting miracles we should eliminate all sources of error.

As to this particular miracle, we must ask, first of all, What proportion the published cases of cure bear to the unpublished cases of death? What does it avail me to know that Drs. Smith, Brown and Jones have had, each a successful case of operation for relapsing appendicitis, if it is concealed from me that three other equally good surgeons have each had a fatal case? Of thirty-six operators who have published cases of this operation, twenty-two have rushed into print with but one case each. Would they have published those cases had their patients died? And are there twenty-two other silent surgeons of equal renown who has each lost his patient and who are waiting for further experiences before coming to definite conclusions? Is there any reason in human nature in general, or in the peculiarities of the surgical profession in particular, which should make men more eager to publish their successes than their failures? To ask the question is to answer it. The publication of cases of great success flatters the surgeon's pride and helps his business. It is both pleasant and profitable. The publication of his failures galls his sensitive vanity, and though it may add to his reputation for honesty, nevertheless inevitably injures his prestige with the profession, for physicians are, after all, but men, and their confidence is gained by the appearance of success and lessened by evidences of failure. There is many a surgeon in large practice, who would lose a part of the business which he gets from the profession if his failures were insisted on with but half the persistency with which he has trumpeted his successes. These are facts which every one knows and no one speaks of, and I defy any man practicing surgery to be absolutely indifferent to those things which influence both his professional reputation and his business. Besides these meaner motives, which influence all men more or less, there are others of a higher character which impel the surgeon in the same way. He, who having faith in some new idea or procedure, puts it successfully in execution, feels elated and confident. The desire to communicate the happy results of his action to the profession, assumes to him the appearance of a duty which he owes to humanity. The record of his success almost writes and publishes itself, so easy it is to communicate to the world that which promises good fortune to everybody. If, however, he fails and the patient, whom he has hoped to benefit, dies as the result of the operation, he will, if a conscientious man, feel something akin to remorse. If the patient has died of sepsis, he will feel, too, that he has committed a fault as well as suffered a failure. Now, to onlookers, it is true, the duty of rushing into print may seem no less positive then than if he had success, but it does not seem so to him, and even though it should seem to him right to publish his disasters, there is no occasion for hurry. Nor does a failure or two, necessarily indicate that the operation was wrong or that the profession should be too rashly discouraged. In short, it is natural for a surgeon under such circumstances to wait for further experience before publication and the result is just what any one might anticipate—an accumulation in the medical journals of records of triumphs. We miss in our reading that most instructive of all records—the death record.

And yet, curiously enough, sometimes those very death records may be exaggerated. This will happen when enthusiasts for a certain therapeutical procedure endeavor to collect cases which show the frightful mortality to which the disease in question is subject when treated by other methods. Take, for instance, this very subject of appendicitis. Where do these statistics come from, according to which twelve and five-tenths per cent. die if not treated by early operation? I know of no trustworthy records which would warrant any definite conclusions in regard to the relative mortality of appendicitis treated with or without operation. The data do not exist on which such statistics could be based. The reports of professional surgeons and of hospitals must, of necessity, concern chiefly the more severe cases, for they alone are sent to the hospital and surgeon. Collections of cases by individual practitioners would be too limited and too much biased by individual prejudices to be alone of much value. If, indeed, we had records kept with scrupulous care for years together by many first-class family practitioners we might form a judgment approximately true as to the prevalence of appendicitis and the relative mortality. But even such records would probably ascribe to the disease too grave a prognosis, for I have no doubt whatever that very many of the lighter cases are treated lightly or not at all, on the supposition that they are simply catarrhal or other affections of the general mucous membrane of the intestine. It is only a few days ago, that DR. BONNING called me to see a physician, with appendicitis, who had continued to pursue his ordinary duties three or four days after the beginning of the attack, in the belief that he was suffering from a trivial disturbance of the bowels. I have at this moment under treatment for recurring appendicitis a patient who has had numerous attacks which had been credited to other pathological conditions, and some of which had no systematic treatment. It is not impossible that some of the lighter cases run their course and get well without any medical advice whatever. To talk of statistics under such circumstances, in the sense of trustworthy and complete records, is to talk of something which could not by any possibility at the present time exist. Nor would mere figures, even though trustworthy, be safe guides in computing our successes. If we could determine the number of deaths in a given number of cases with mathematical exactness, it would not determine for us the degree of danger in any one given case.

There are cases with high temperatures and cases with low temperatures, cases with great inflammation of the cellular tissue, and cases in which that tissue is not at all involved, cases which ulcerate into the peritoneal cavity, and cases in which that cavity is as safe as the pleural, cases with great nervous shock and those which run their course without causing any marked pain or uneasiness, and the duty of the surgeon is, rather to study these conditions in all varieties and learn, if he can, to distinguish the cases which imperatively demand an operation from those in which it is safe to wait, than to determine a routine line of treatment founded upon worthless statistics. The fatal vice common to all of these hodgepodge collections of facts is, that they are of necessity incomplete and yet they are foisted on the profession as complete and trustworthy data.

It is, for instance, utterly impossible for any man to learn how frequently or with what results the operation of removing the vermiform appendix has been performed in the latent stage of relapsing appendicitis. For the last few years it has been discussed in every medical society in the country. There is hardly a medical journal which does not contain a complete list of rules regulating its performance by some positive surgeon who may never have had a case. The vigorous and enthusiastic advocates of operations for these disorders have produced a profound impression on the medical public. The vigor and positiveness with which operative interference for recurring appendicitis has been done on paper has, in fact, created a wide-spread impression that it is an established procedure, which no well-regulated surgeon could afford to slight. You will remember that it was stated in our discussion that the operation was adopted as a rule by the best and most progressive men in the east, and, I fancied (possibly I was mistaken), that there was a half expressed intimation that if some of us wished to keep up with the procession, we would have to go a little more lively. I must confess that I was a little startled when I compared the tables of operations reported up to date in Dr. Bull's paper with my impressions.

If the reports are complete, there have been, in the six years since the operation was first done for recurring appendicitis, in the whole world only seventy-six operations of this kind. In New York city, where all of the best surgeons operate as soon as cases fall into their hands, there have been, as nearly as I can make out, just twenty-four cases. In Chicago, just one. In Saint Louis, New Orleans, San Francisco and Buffalo, none. I am not quite sure about these figures because I do not know where all of the men live whose names are in the statistical table. Dr. Bull tells us explicitly that he was consulted as to the propriety of operating in twenty-four cases of recurring appendicitis, and advised against an operation in twelve, operating in the other twelve, which he classes together under the head of relapsing appendicitis. In nine of the patients, in whose cases he advised against an operation, "there had been a number of attacks varying from three to a dozen." He limits his operations, if I understand him correctly, to cases in which "there is a history of continuous discomfort or pain on exertion with or without irregularity in the action of the bowels.

I think that I can see in these facts a perhaps unconscious scepticism on the part of the author as to the credibility of the very statistics which he quotes with approval. For, if appendicitis is associated with the great dangers generally ascribed to the disorder, and if the operation for its relief is one of so litttle hazard, how can any man conscientiously refuse to operate on any and every case which presents itself? The fact is, however, there are two kinds of knowledge. There is the theoretical kind which is acquired through other men's say-so and the acceptance of so-called statistics, and there is the other kind which is burned into a man's flesh and bone by practical experience, and unfortunately the two kinds do not always harmonize. A man learns in the periodical medical literature that the operation for appendicits with removal of the appendix is a very ordinary thing, and with a mortality of less than two per cent. is practically without danger. That is his book knowledge. After a certain amount of experience he learns that it is a very difficult operation, liable, notwithstanding the utmost care, to be followed by suppuration, in some cases by septic peritonitis and death, an operation which cannot be performed in a long series of cases without the occurrence of the rupture of the bowel or some similar distressing accident. As the result of this practical knowledge he becomes impressed with an idea at variance with his book knowledge, that it is an operation full of risk and danger, and while he cannot quite reconcile his experience with statistics he nevertheless learns caution in his methods of treatment.

There are one or two other points to which I wish to call attention. In at least two of the cases reported the appendix was found practically destroyed. It is evident that in such cases it is not the persistence of the appendix which kept up the constant irritation, but the presence of the old inflammatory deposits. The question arises as regards the other cases: How much of the irritation must be ascribed to an inflamed appendix and how much to other morbid conditions? As far as the operations for their relief is concerned, indeed it would make but little difference, as in either case the surgeon is justified in cutting down and removing the cause of trouble. It does make, however, a great practical difference in operations for the relief of acute appendicitis, in which the removal of the appendix may, in some cases, add vastly to the danger of the operation, which would be slight if the surgeon contented himself with opening an abscess in the connective tissue. If the recurrence in many of the cases is due to the same kind of inflammatory exudations which so often cause trouble after other laparotomies, it is evident that it might take place after the removal of the appendix. It would be interesting to learn how many cases of recurrence of symptoms have taken place after the radical operation.

Before closing what might seem to be an ungracious criticism, I wish to say that Dr. Bull's paper has been to me a source of most valuable information. I am filled with profound admiration for the conservatism with which he has treated his cases, in spite of theories, which, if carried out to their logical conclusions, would have seemed to warrant just such radical and sweeping measures as have been advocated in this society. His conservatism, indeed, exceeds my own, for I frankly confess that I should be tempted to operate on some of those cases in which patients had suffered from three to a dozen recurrent attacks and in which he refused to interfere. His judgment was doubtless better in the matter than my own would have been.

Recurring again to the theme of my paper, I wish to emphatically protest against this too common practice of thrusting incomplete summaries of cases on the profession and dubbing them statistics. It would not matter much if there were not a great many in the profession who have been accustomed to look with awe upon such worthless figures and to regulate their practice by their study. In fact the compilation of trustworthy medical statistics is one of the most difficult achievements in science, and the conditions under which the practice of medicine and surgery is conducted are such that it is rarely possible to express in figures our best experiences. For this reason we cannot be too careful in accepting doctrines based upon a limited number of observations, and we must never forget that accurate conclusions cannot be drawn from any number of observations which do not take in all of the factors in the case.

INTESTINAL OBSTRUCTION.*

By HOLLIS F. SIGLER, M. D., PINCKNEY, MICHIGAN.

INTESTINAL obstruction, with its attendant evils, is of such frequency as to demand our most careful study both as to the best means of diagnosis as well as most efficient treatment. It occurs in all classes of society with about equal frequency and the general practitioner may be certain that he will meet such cases, sooner or later, and find his skill taxed to its utmost in arriving at a correct diagnosis and successful treatment. Treves says "that exclusive of hernias two thousand people die annually in England from intestinal obstruction," and a perusal of American medical literature proves conclusively that a large number of our own countrymen succumb to this affection every year. A complete differrential diagnosis at the present day presents many difficulties, and the sooner we acknowledge this fact and cease trying to make fine distinctions the more effectual and safe our treatment will become.

A brief review of the possible form of obstruction brought out in a differential diagnosis shows very conclusively the utter impossibility of being even reasonably sure of the exact nature of the lesion in a large majority of cases. The principal symptoms of obstruction, pain, vomiting, and constipation, are common to all forms in greater or less extent, no two cases of the same variety presenting the same symptoms. Every case must be studied on its merits and no hard and fast rules can be laid down for our guide. Each case must be carefully investigated as to its history, and then in only a small number of cases can we approximate the true condition.

We become reasonably certain that an obstruction exists, but whether it be a knuckle of intestine bound down by a band, a knuckle strangulated, a twist, or a stricture of the gut, it is difficult to say. Pain and constipation are the primary symptoms observed. If not relieved these are followed by vomiting and collapse. The intestine above becomes distended with gases of fecal matter. Tenesmus is usually present. The temperature is below normal and rarely rises unless inflammatory symptoms arise. With such a combination of symptoms we may be reasonably sure that an obstruction exists. Many methods of locating the seat of obstruction have been adopted and much valuable time has been lost and harm done in this way. Enemas are generally resorted to to remove the obstruction, as well as to locate the trouble, but as a means of diagnosis they are generally useless. The passage of the much vaunted long tube is equally useless. Treves mentions a case where a surgeon passed a tube so that the end could be felt near the umbilicus, maintaining that the instrument had reached the center of the transverse colon. The autopsy revealed an impervious stricture of the commencement of the sigmoid flexure.

Without going further into the symptoms and diagnosis which are familiar to all, and, granting that we have been fortunate enough to locate the seat of obstruction, what better off are we than before? If the case be an urgent one, much valuable time has been lost in obtaining knowledge which will do no good.

A few months ago I was called in consultation to see a patient suffering from undoubted symptoms of intestinal obstruction. Forty-eight hours before I saw him he was taken with a severe pain near the umbilicus, which was soon followed by vomiting and faintness. The attending physician had endeavored to move the bowels by enemas and often-repeated doses of sulphate of magnesia, hypodermic injections of morphia for pain, and hot fomentations to the bowels. I suggested and urged laparotomy as the only means of relief, which was reluctantly assented to by the attending physician, and utterly and emphatically rejected by the family. The autopsy showed a complete twist of the bowel, a condition impossible, I believe, to remedy by any medical or mechanical means otherwise than surgical.

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*Read at a stated meeting of the DETROIT MEDICAL AND LIBRARY ASSOCIATION, and published exclusively in The Physician and Surgeon.

Laparotomy offered the only chance in this case, and performed early or before disintegration of the bowel took place, or the vital powers too far reduced, offered a fair chance of recovery. If by laparotomy we only obtained a satisfactory diagnosis the operation should be condemned, but this operation puts us in possession of the pathological condition beyond any question of doubt, and in a position to treat the case intelligently and without fatal loss of time, and is a measure far more humane than trusting to providence and dry powder. Purgatives are allowable in cases of fecal impaction by foreign bodies but for any other form are totally inadmissible. They are capable of great damage and should be practically discarded altogether, for we can rarely be sure the case is one of infraction and should it be otherwise, great harm would result. Metallic mercury has been used, and along with purgatives, massage and electricity, might do good in fecal impaction, but would be injurious in all other forms of obstruction, as they increase peristaltic action and in a majority of cases this is the result we wish to avoid. Opium is of the greatest value in intussusception. It allays peristaltic action, pain, and vomiting, and puts the gut in the most favorable condition for return to its normal state. We should use this drug with care, however, always bearing in mind that, while the acute symptoms are held in abeyance, the damage to the intestine is still going on, and, unless the relief be prompt, and bowels soon move, we should at once proceed to more active measures. Thorough treatment by enemata should be resorted to in nearly all cases. Illoway, in his monograph on "Intestinal Obstruction," urges very strongly the use of enemata under heavy pressure, using a force pump for this purpose. He contends that water can be forced past the ileo-cæcal valve into the small intestines, and that thus, obstructions in this part of the canal can be reached. I think many would be inclined to doubt this as most of the experiments to prove it have been made on the dead body, therefore open to criticism. Dawson experimented on fourteen cases before his class, and only in two cases did the valve yield and the water pass upward. If the valve holds in about eighty-six per cent. of the cases, and this in dead bodies, we cannot hope for much success in the living. And then, again, the force recommended by some authors to accomplish this result would be extremely dangerous. The rupture of a diseased intestine would not be among the least of these dangers. An enema given gently and in sufficient quantity will accomplish all the good that we can hope to derive in this way. In some rare cases of intussusception, the forcing method might liberate the bowel, but I think few practitioners will care to rely upon this course. Insufflation acts much in the same manner as enemata, though lacking the clearing effect of the latter. Filling the bowel with salt water and applying electricity has been advised, but is equally useless. Granting that what has been said of the different methods of treatment is true, who can advise much delay before proceeding to active operative measures?

If we knew the exact pathological condition, we could apply intelligent treatment with hope of success, but that is exactly what we do not know in the vast majority of cases, and by laparotomy only, can we find out. Early and correct diagnosis is perhaps more important in this class of diseases than in any other, yet this is what we are often absolutely precluded from making. In looking over the statistics we are forced to remark that the operation has not been as successful as could be desired, but in defense of this fact we must also acknowledge that in the vast majority of cases it has been a means of last resort, and the case hopeless long before it was performed. The rate of mortality will not be materially lessened till physicians recognize these cases are purely surgical and should be turned over to the surgeon early.

Treves has collected together, exclusive of cases of intussusception, one hundred and twenty-two cases of laparotomy for intestinal obstruction, with seventy-seven deaths, about thirty-three per cent. Of these deaths one was from obstruction from foreign body, eight from strangulation by diverticula, three from strangulation through slits, six from intestinal hernia, and thirty-one from strangulation by bands, making a total of forty-nine preventable cases with fair prospect of saving some others by timely operation. Schramm, in his collection of one hundred and ninety-three cases of laparotomy for the relief of intestinal obstruction, shows a mortality of about sixty-four per cent. It is noticeable in the above tables that the cases last in the series show, under improved methods, a much better rate of mortality. Many of the cases were operated on while the patient was almost moribund, in other cases there was acute general peritonitis and profound exhaustion, and in nearly all recorded cases the reader is thoroughly impressed with the fact that it was a "court of last resort."

The table shows in a graphic manner how serious a delay of even twenty-four hours may be. How important a bearing this fact has on the two great factors that affect the issue of operation, the condition of the patient and the state of the intestine, no one can over-estimate. Many of these cases occur in the country far from expert surgical aid, in homes where, to even attempt modern antiseptic surgery would be a burlesque and a mockery. In an experience of fifteen years of country practice it has been my fortune to meet with several cases of intestinal obstruction of the most serious form, and in only one case, a case of intussusception, where the invaginated portion sloughed away, did a recovery take place. Conservatism, which is being constantly preached to us, is not only to condemn the sins of commission, but also to cover up the sins of omission. The greatest objection to laparotomy is the danger in section of the abdominal wall and the introduction of the hand into the peritoneal cavity and the manipulation of the intestines. By modern surgical methods this danger has been reduced to a minimum in hospital practice, but country practice, where such advantages are nearly impossible, and the hygienic surroundings most undesirable, the physician should still be ever mindful that "He who hesitates to open the abdomen and attempt to remove the constriction in a case of acute obstruction, after a fair trial of remedial means, is as culpable as one who delays to operate for unrelieved strangulated hernia."

NEURECTOMY AND OÖPHORECTOMY IN THE RELIEF OF HUMAN SUFFERING AND THE SAVING OF HUMAN LIFE.*

By SCHUYLER C. GRAVES, M. D., Grand Rapids Michigan.
VISITING SURGEON TO THE U. B. A. HOSPITAL.

THAT we, physicians and surgeons, are working factors in one of the noblest professions on earth, is axiomatic. The sweetness of health and the more than sweetness of life, with our relation to both, might serve to elucidate the proposition were elucidation at all necessary. On this account, perhaps, when one is about to prepare a medical thesis, he naturally chooses that theme which bears the impress of practicality; not because medicine is devoid of æstheticism, for the healing art has its poetical side, and the temptation to go rambling off in the fields of medical poesy is oft times quite alluring to those in whom the æsthetic germ has undergone a material development; but, as a rule, the practical aspects of medicine so tremendously outweigh the æsthetic by coming into such vital touch with the great problems of physical, mental, yea! moral, and, perhaps, even spiritual existence, directly or indirectly, that the latter float away from our minds and leave us in the presence of the practical as the more worthy of our consideration.

Could I be assured of being able to add one jot or tittle to your stock of information in the relief or mitigation of suffering and the saving or prolongation of life by this modest effort, I would consider the time well spent in the cause of humanitarian surgery. I say *humanitarian* by way of contrast with the indiscriminately slashing procedures which are a disgrace to our profession in this country to-day. A learned doctor has said that the worst disease which is afflicting the American public at the present time is gynecology, and I believe he is right. With the swing of the pendulum to the other side of the perpendicular the activity began. Thousands upon thousands of physicians, regardless of age or experience or natural ability, seized the knife and proceeded at once to lift the omental veil and peer into the depths of the female belly—exploring the abdominal cavity. A medical wit lately said to the writer that these young operators were so recently within the abdomen of a woman that they wanted to get back again. Progressive gynecology, and I would be the last to decry it, has its place in medicine, and time, that stern and inexorable arbiter of right, will separate the chaff from the wheat—is already doing so; but I digress.

In looking over my case-book to find something of practical import for presentation here this evening I selected the record of a patient who forcibly presented the two great desiderata which occupy the attention of both doctor and patient in the aggressive warfare against disease and death, namely; (1) Relief from pain. (2) Restoration to health. I might, perhaps, mention at this juncture that through the science and art of surgery our patient secured both. The history of the case—or cases, for there were two in one—is briefly as follows:

I.—SALPINGO-OÖPHORECTOMY.

Mrs. S. T., colored, age thirty-eight years. Case one of large intramural uterine **myoma**; first noticed five years ago (1888); hæmorrhages severe and exhausting both at and between menstrual epochs; tumor extended to umbilicus and presented an oblong contour, being much longer than wide; has been treated by internal administration of ergot and potassium iodide for months without avail; Apostoli's method, also, has been faithfully employed for a similar period of time and by an experienced electro-therapeutician; but electricity, while at first seeming to exert a salutary influence over the morbid phenomena present, especially in diminishing the frequency and profuseness of the hæmorrhages, soon lost its effect and the patient was worse than ever.

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*Read before the Bay County Medical Society, Bay City, Michigan, April 10, 1893, and published exclusively in The Physician and Surgeon.

At this point in the history, at the request of the family physician the case fell under the observation of the writer who, after due deliberation, recommended a double salpingo-oöphorectomy for the purpose of precipitating the menopause, thus anticipating the beneficial effects which would normally follow. The patient consented and was removed to the U. B. A. hospital, Grand Rapids, where her operation was done, March 7, 1892.

One feature of the operation may be instructive and so I make partial quotation from my record: "Right ovary and tube easily located, delivered, tied off and removed; but on left side all was bound down, necessitating careful and tedious dissection. The ovary and tube, however, were removed in the following manner: An opening was made in the broad ligament between bases of round ligament and Fallopian tube; a strong, double ligature of braided, aseptic silk applied close to uterine wall; another, a half inch externally and tissue cut between. The mass containing tube and ovary was then peeled away from the uterus until ovary was cleared, at which point another double ligature was applied and mass removed. Several arteries in uterine wall, between layers of broad ligament, required ligatures (catgut) and then the edges of ligament were brought together over raw uterine surface by sutures of aseptic catgut."

The operation was finished as usual. The woman, barring a bronchitis developed by an unwitting exposure to a draught and in spite of the fact that the majority of the physicians who witnessed the operation prognosticated death, made a good recovery and but once since has she experienced a hæmorrhage except, of course, the outflow which always follows this operation within a few days. The hæmorrhage referred to, which was the result of great bodily labor, lasted only a few days. The patient was deeply exsanguinated at the time of the operation and this fact together with the unusual complication encountered was sufficient to render the case a grave one.

During the months that have passed since the operation the tumor has grown smaller and the general condition become excellent, save in one respect. For the past few months there has been a constant oozing of clear, odorless fluid from the vagina. This seems to be serum and has had as yet no perceptibly bad effect upon the patient's health. She is growing fleshy, is doing all her housework and states that she never felt better in her life.

Just before the patient was to leave the hospital, however, (about a month after entrance) the following portion of her history was contributed:

II.—NEURECTOMY.

Mrs. S. T., colored (same person as above). This patient has recovered from a double salpingo-oöphorectomy, but has been troubled, off and on, with an excruciating neuralgia of neck and posterior auricular and temporal regions; medicine has been tried for years, as the affection has been chronic, but to no avail. The writer noticed that the pain always started at the point where the ascending division of the superficial cervical plexus of nerves emerges from the deep fascia, namely, at posterior border of sterno-mastoid, midway between the muscular origin and insertion.

As the pain invariably ascended behind the ear to the cranial vault and never proceeded across the neck, the superficialis colli was considered sound, the trouble being located, probably, in the auricularis magnus and occipitalis minor branches. The operation of excising two inches or so of these two nerves was proposed and readily accepted, as patient's pain was intolerable, causing her to exclaim that we might remove her head if by so doing we could promise relief.

The operation was successfully carried out at a time when the patient was temporarily free from pain. In a few days pain recurred, though in less severe a form than previously. Once more it returned, a few days later, modified, timorous, and then took unto itself wings and flew away. It must have cast its lines in more propitious places for it has not as yet returned to its accustomed haunts. How long this good result will obtain we cannot tell for recurrence is not uncommon; but we will rest content in the hope that, in this particular at least, the present will represent the future. Patient left hospital, sound, on April 25, 1892, six weeks from date of admission and two weeks from date of neurectomy.

Now, gentlemen, let us discuss as briefly as possible the points involved in the above cases.

As to the neurectomy we need not be detained long, although one who suffers the anguish incident to a severe neuralgia might deem the subject worthy of quite extended consideration. In fact, many conditions which do not involve the loss of life are, nevertheless, of great moment to those concerned, as neuralgic subjects well understand, and they ought to, and do, receive attention at the hands of the scientific leech.

But I would dwell more particularly upon the ovarian portion of the problem as, after all, the much more important of the two, involving as it does the lives of so many women, especially those of our colored sisters.

The operation of double salpingo-oöphorectomy for the cure of uterine myomata was first done, as you are all probably aware, by Lawson Tait, the date of the operation being July 27, 1872. About the same time, though a little later, Hegar, of Frieburg, according to Tait himself, independently suggested and executed the same operation.* Battey, of Georgia, claims that in 1865 he "conceived the idea of producing an artificial menopause for the remedy of disease;" but he did not publish his idea until 1872. The date of his first operation I know not. However, be it as it may, the credit of the operation must be shared by these three surgeons.

Prior to the time Tait's operation, partial hysterectomy (abdominal), was the agency through which these growths were handled, the first definite operation of this nature having been done by Granville in 1837, according to Greig Smith, but in 1827, according to Tait. There is a discrepancy of opinion as to the date.

Referring to the comparative mortality and taking up, first, that for hysterectomy, we find Greig Smith to state:†

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*Smith (Greig): second edition, page 172.

†"Abdominal Surgery," second edition, page 263.

"According to Vantrin, in supravaginal amputation the general mortality with intraperitoneal treatment of the pedicle, is fifty-six and two-tenths per cent.; with extraperitoneal, thirty-three and three-tenths per cent. Although this death-rate is far in excess of what may be termed the legitimate mortality—that is to say, the mortality in the hands of the best operators—it is more than probable that the proportionate mortality is the same all around. In other words, the dangers of the intraperitoneal treatment are nearly twice as great as the extraperitoneal."

Think of it! thirty-three and three-tenths per cent. mortality after the safest form of operating; and we must remember that the majority of myomatous patients will not be operated upon by the masters and that, therefore, this rate is approximately correct.

As to the mortality following the removal of the appendages for the same condition, **Smith** (page 187) states that "the general mortality of the operation for myomata is somewhere near ten per cent." Tait, in a series of one hundred and fifty-four cases, reduced the mortality to one and fifty-three one-hundredths per cent. Of course, such a figure is far below the average rate. This great surgeon, in his late work,* discussing this procedure, says: "The mortality of the operation . . . in the early stage of the disease, is a mere bagatelle and the certainty of cure is at least ninety-five per cent." Here is a statement as to curative results as a reference to mortality. **Smith** (page 187) bears strong testimony on this point, also, as follows: "As to results we may, in every thirteen cases of recovery after operation, reckon upon complete cure, that is, shrinking of the tumor and menopause, in ten cases; improvement in two, and failure in only one." This record, he adds, will continue to improve and certainly with a mortality in the neighborhood of five per cent. the present status of the operation is a brilliant one. The enucleation of small myomata per vaginam is tempting, but according to Tait is, first, unreliable as a means of cure and, second, dangerous to life, from the subsequent occurrence of hæmorrhage or peritonitis which have often been noticed. Says **Greig Smith** (page 243): "Theoretically, its mortality is high."

Gentlemen, you have the vital facts of this subject before you, and although Homans, of Boston, in a communication,† last year, after declaring that "Removal of the ovaries for the cure of fibroids . . . was at one time extensively practiced," and giving his record of four cases, with three practical ones and one failure, states that he is inclined to regard the operation as unreliable, we must still beg permission to believe contrariwise.

All uterine myomata, we are well aware, are not amendable to the operation we are discussing. The rapidly growing œdematous myoma, occurring especially at or subsequent to the menopause, for Tait says that such tumors are not a disease of menstrual life, seems, according to authority, to demand hysterectomy.

A fibro-cystic uterine growth also calls for hysterectomy; but this abnormality very rarely occurs and is, withal, very difficult of removal when found.

Some myomata even disappear by absorption, without treatment of any kind. Again myomatous growths occurring near the menopause should be palliated, medicated (ergot, iodide or bromide of potash), or electrified, or both, until the influence of the post-menopausal era shall have an opportunity to show what may happen for the benefit of the patient or otherwise.

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*"Diseases of Women and Abdominal Surgery," page 190.

†*Medical News*, June 11, 1892, page 647.

In all young women, especially in young married women, in whom the dangers may be exaggerated by pregnancy, when palpable uterine myomata give rise to profuse hæmorrhages, with or without pain, and are associated with more or less rapid growth, the operation of salpingo-oöphorectomy, after a negative medical trial, should be done; but it should be done early, before the patient has been devitalized by extreme exsanguination.

I believe that early operations are consistent with the employment of conservative methods, such as internal medication and the use of the current, which ought always to be tried before proceeding to the more radical plans offered by surgery. If operation be decided upon in any given case and after the abdomen has been entered only one appendage can be discovered or attacked, a hysterectomy should be done or the operation abandoned for obvious reasons.

In conclusion, gentlemen, I wish to state as my firm conviction the fact that the surgeon who would deliberately subject a woman, seeking relief from a uterine myoma, to the increased dangers of a hysterectomy, complete or partial, intraperitoneal or extra, unless in the exceptional cases referred to above, would, were his patient to succumb (and a thirty-three per cent. rate, at least, is staring both in the face), expose himself to the liability of a suit for damages in which his more conscientious colleagues could bring him but small support if called upon to testify.

LECTURES.

CHILDREN'S HYSTERIA AND ITS TREATMENT.

By THOMAS LINN, M. D., Nice, France.

A number of writers have followed Dr. Chaumier in his ideas on this question which he presented in his work to the academy of medicine (Paris), December 1, 1891. Without going so far as these authors, it is certain that this question has considerable importance. It is by no means easy to make the diagnosis, and as to its treatment, it demands the most serious attention of all physicians. It is indeed a question of public and social hygiene, as no thinking person can see the enormous increase in nervous diseases without asking, Can anything be done to stop it? A few years ago we should certainly have smiled if we had been told that some of the most vigorous-looking men were attacked with hysteria, as we had lived in the idea that this malady was only seen in weak women. Peugnier has proved since the importance of hereditary taint, and divides the characters of this affection into three catagories: (*a*) Hysteria without attacks, shown by exaggeration in affection, telling of lies, excentricity, and femininism in boys. (*b*) These are the attacks of hysteria similar to those seen in adults. (*c*) Here we have the intermediary phenomena, such as hyperesthesia, anæthesia of skin, et cætera, visual troubles, gastric disturbance, spasms, cough, hiccough, motor troubles such as contractions, paresis, et cætera.

The differential diagnosis with epilepsy is important. The fact that these attacks can be arrested by pressure on certain points, such as in the iliac fossæ; the sensation of fatigue, but absence of stertor, and the fainting of epilepsy and the non-action of bromides must be noticed in all cases. Boulimia and increase of the urinary secretion, as well as the modification of character, and all psychic troubles should be taken into account. A case in point is as follows: L. M., a girl of fifteen, who had a nervous father, very impressional but not alcoholic. The mother had attacks of hysteria from the time she had her monthlies. The child had convulsions in its first year, but remained well, however, up to eight years of age, when, after a school party, she was taken with a convulsive crisis and loss of consciousness. Treated with bromides, the next day she had the same sort of an attack and the mother found her in bed quite stiff, her eyes closed, and apparently without consciousness. She shook her, and the child went into tonic and clonic convulsions. This was followed by a period of sleep, during which she complained, while her eyes were convulsed upwards, and the face had the appearance of extacy. Catalepsy was easily provoked. She was treated for six months in the hospitals with bromides, valerian, douches, et cætera, but with little result. In 1888, we saw her and by pressure over the left ovary we could control her attacks. In 1889, the attacks having persisted, we tried hypnotism. She slept at once by fixing her eye in ours, and in three months she was much better. For six months she had no more attacks and (in 1891) menstruation having become established and acting without difficulty, she has been quite well ever since.

A second case was M. D., a girl of fourteen. Mother, a nervous type, and father, normal, as near as we could find out. She had convulsions at three months, and since she was eight years of age has had attacks as follows: sensation of ball in the throat (*boule hysterique*), and strangling, in the throat also, hiccough, then fall with a loss of consciousness and sometimes froth at the mouth, an involuntary emission of urine. Hallucinations after attacks, which returned every two weeks. Had been treated with bromides without result. No menses yet, and she was very impressionable. Treated by suggestion for three months. The intensity of the attacks first of all diminished and then afterwards disappeared.

It will be noticed in this case there was incontinence of urine and yet no epilepsy. Mathieu has given a number of cases where this has occurred and yet they were pure hysterical patients. So that this sign is by no means pathognomonic of epilepsy.

A third case was a girl of thirteen. Mother, very nervous subject, who before she had her courses often fainted and had attacks of hysteria. The father was rheumatic but not alcoholic. Since the age of five the child cried or laughed without any reason for it. When she saw blood or a wound of any kind she fainted. One of her brothers having been wounded in the knee, we were called to see her. She said that she felt a cramp in the stomach which went up into her neck. She fell, lost consciousness, was stiff, but did not have convulsions, except a movement of torsion of her wrists. She did not cry out and had no incontinence of urine. Her sleep was fair, but headache rather bad. On a second examination the left ovarian region was found sensitive, and she complained of pain in the abdomen which she could not localize. Her sight was weak but she went to school. We prescribed intellectual repose, pills of valerian and assafœtida, and, above all, that but little attention be paid to the attacks when they occurred. A considerable amelioration took place at once and the attacks ceased soon afterwards.

What is the best treatment for such cases? And what should be done as regards the education of such children? The therapeutics of hysteria in children is not yet perfect. Antispasmodics and bromides seem to fail in most cases. They are even looked upon nowadays as a method of diagnosis between such attacks and epilepsy. We have then, hypnotism, or suggestion, a new arm that we know very little of for certain. Some physicians look upon it as charlatanism to employ it, and others think it is the greatest discovery of the present age. But outside of all doctrine we think that clinical facts are the most important practically, and we cannot but think that, above all in children, this method is proper and real medication. Suggestion during hypnotic sleep produces good results. It should be presented to such parents as a means of persuasion, which will bring about a calm state in these agitated brains, but not make any miracles. This operation should have taken away from it all that is extraordinary, and should be practiced with conviction as a hygienic method of cure, such as gymnastics, et cætera. We cannot find that it does any harm to such patients and it may be made of great benefit for them. They always wake up quieter and better for the sleep. The next point of importance in these cases is to teach parents that they should not pay much attention to such cases, for if they alarm the patient during the crisis they are sure to repeat the attacks often. It is perfect indifference that is the best way to look upon such attacks and they will often then give them up, but once allow that they are of importance and you will see them repeated constantly as long as any interest is taken in them. This constant agitation then will do infinitely more harm than any hypnotic operation from which only calm results. As to education, these children should be sent to school with the others and instructions given to pay no attention to their attacks.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, FEBRUARY 27, 1893.

THE PRESIDENT (*pro tempore*), EUGENE TILTON, M. D., IN THE CHAIR.

EXHIBITION OF PATIENTS.

DR. A. E. CARRIER exhibited a patient, a woman forty-two years old, suffering from lichen planus.

DR. CARSTENS: Are you sure there is nothing specific about the case?

DR. CARRIER: Yes; there is absolutely no specific history.

DR. CARSTENS: The deep, copper-colored discoloration is very suggestive of a specific origin, and I would be inclined to give her a thorough course of anti-specific remedies.

DR. A. N. COLLINS: Do specific eruptions usually itch as this one does?

DR. CARRIER: No.

DR. J. FLINTERMANN: It does not look to me like a specific case. If it were specific trouble other syphilitic manifestations would be present. The itching does not last so long in specific as in non-specific cases.

Dr. A. P. Biddle: This is not likely to be a specific case. The intense itching is likely to produce a great deal of scratching which gives rise to continued irritation, and this irritation is what produces the discoloration. This is a case of lichen planus. I am very doubtful if Dr. Carrier will get a good result from any kind of treatment. The prognosis in such cases always being unfavorable. Probably the best that can be done for this woman will be the relief of the intense itching.

Dr. A. E. Carrier: The result of treatment in these cases, if seen early, is good. In this case we will saturate the system thoroughly with arsenic. This is not a case of syphilis. She has had attacks of pruritus for years, and her mother is said to have had saltrheum. She has to work all day and cannot obtain sleep at night on account of intense itching, and it is this condition of affairs which is gradually depressing her general health. Locally we have found liquor carbonis detergens to be of the most value. In addition to this we have used campho-phenique, chloral and camphor, sulphur and many other remedies with but little effect.

Dr. Tilton: Burdock has been found to be of value in many of these skin diseases and also in dyspepsia.

Dr. Carrier: I have repeatedly tried burdock without any good results whatever.

Dr. J. B. Newman: This is a case of lichen planus. Externally I would use carbolic acid or bichloride of mercury in diachylon plaster. Internally I would suggest the iodide and bromide of potash given in conjunction with alkalies. This plan of treatment I would prefer to the arsenic.

Dr. J. H. Carstens: I would suggest bichloride of mercury externally, together with mercury and iodide of potassium internally.

Dr. J. Flintermann: Would electricity be of any value? Perhaps the hypodermic injection of pilocarpine would be of value. Menthol locally is sometimes good.

Dr. Carrier: I have never used pilocarpine in this disease, but it might be of value because the condition has its origin in the sweat-ducts but not in the glands.

PATHOLOGICAL SPECIMENS.

Dr. E. B. Smith exhibited two ovaries containing serous fluid; one also contained pockets of muco-pus. The operation was done a week ago to-day and the patient's temperature to-night is 99.4°.

Dr. J. Flintermann reported a case of a boy, five years old, who had been treated by other physicians for six weeks for some form of fever. Empyema was diagnosed and a large quantity of pus was removed from the plural cavity. The patient seemed to do well but relapsed and the fifth and sixth ribs were found to be partially carious. Now, the interesting questions in this case are: (1) Was the empyema or the carious rib the primary disease in this case? (2) Would it not have been better to have excised the rib in the beginning? I look upon empyema as a very difficult disease to cure. It may be caused by tuberculosis, scrofulosis, or gangrene of the lung. In many instances we overlook the true cause of these cases.

Dr. Tilton: In a case which I remember occurring years ago the exhibition of the hypophosphite of lime in five grain doses, together with other treatment, seemed to be of great value.

Dr. J. Flintermann: I used the hypophosphites in this case.

Dr. J. B. Newman: In empyema you can operate at any place, washing out the cavity with antiseptic washes.

Dr. J. Flintermann: In another such case I would make an excision of the rib early.

Dr. J. B. Newman: I have seen such cases get well by opening through the lung.

Dr. Flintermann: It takes a long time to produce a cure in that way, and all the time the patient is suffering, with danger. Drainage is easily procured.

Dr. E. B. Smith: We should not do as **Dr. Newman** recommends, by opening these cases anywhere. The opening should be made at the lowest possible point in order to secure good drainage. We are often greatly in doubt as to whether or not the bone is carious in these cases. The proper thing to do is to open the pleural cavity; drain it thoroughly, and then if carious bone be found remove it.

Dr. J. B. Newman: When the patient is lying down the lowest point is that at which **Dr. Flintermann** opened the pleural cavity in his case.

Don M. Campbell, M. D., Secretary.

STATED MEETING, MARCH 6, 1893.

The President (*pro tempore*), E. T. TAPPEY, M. D., in the Chair.

PATHOLOGICAL SPECIMENS.

Dr. J. Flintermann presented a gummatous tumor removed from the outer surface of the left tibia at the junction of the upper and middle thirds. The tumor had existed for over six months, during which time it had been continuously poulticed. There was a purulent discharge and the whole appearance was suggestive of dead bone. The history pointed to a traumatic origin. He is now on large doses of iodide of potassium.

Dr. T. A. McGraw: I do not know how these cases can be diagnosed previous to extirpation. It is not often that we see them so large.

Dr. J. Flintermann: Authorities give this as the usual place for their occurrence. It grew large because it was so long poulticed.

Dr. E. T. Tappey: In a very fat patient, whom I saw recently, the chief symptom was epigastric pain. The patient was eighteen years old. It was thought that the pain was neuralgic in character but it did not yield to antineuralgic treatment. The left ovary was the seat of a great deal of pain at each menstrual period. An incision was made into the epigastric region and the pain in that locality disappeared, but the pain in the region of the left ovary grew gradually worse until it was unbearable. The ovaries were removed, the left one being cirrhotic, the right cystic. I would like to ask **Dr. Carstens** if he thinks the epigastric pain was in anyway connected with the ovarian disease.

Dr. J. H. Carstens: We may have reflex pain, from a diseased ovary, in any part of the body. These cirrhotic ovaries often produce a great deal of pain. It is not the large diseased ovaries which cause the most pain.

Don. M. Campbell, M. D., Secretary.

STATED MEETING, MARCH 13, 1893.

THE PRESIDENT, FREDERICK W. MANN, M. D., IN THE CHAIR.

PATHOLOGICAL SPECIMENS.

DR. E. T. TAPPEY exhibited a cyst removed from the breast.

DR. DONALD MACLEAN: This tumor exemplifies a very interesting class. It would be a good thing if we could diagnose these cysts early, and in which case the proper thing to do would be to tap them and inject them with iodine. In a patient forty-five years old, as a rule, the breast should be removed entire, but if a cyst of this kind could be surely and accurately diagnosed, it would save sacrificing the whole breast and prevent the consequent deformity.

DR. J. H. CARSTENS: I beg to differ with DR. MACLEAN. I do not consider the injection of iodine in such cases good surgery.

DISCUSSION OF PAPERS.

DR. H. F. SIGLER, of Pinckney, Michigan, read a paper entitled "Intestinal Obstruction." (See page 200.)

DR. H. O. WALKER: Intestinal obstruction may be divided into acute and chronic. The former is what DR. SIGLER takes up principally in his paper. These cases of acute intestinal obstruction embrace such conditions as volvulus, intussusception and strangulated hernia which has been pushed back into the abdominal cavity. Impacted fecal matter may also be at the bottom of the trouble. Vomiting is not always present. Where impacted feces are causing the obstruction an attempt should be made to liquify them and thus get rid of the obstruction, but too much time should not be lost in dallying with the remedies. An exploratory incision should be made and if there is any obstruction it should be relieved. In a recent case sent to me from Canada, the patient had had long and persistent vomiting and presented a growth in the neighborhood of the pylorus. I made a cœliotomy and now he is doing well. The vomiting has stopped and he is gaining flesh.

DR. T. A. MCGRAW: It is an extremely difficult thing to make the diagnosis accurately in these cases as the following instances will show: (1) I was called to Bay City to see and to operate upon a case of intestinal obstruction. I went fully prepared for the operation, but a little while before I arrived at the house, the patient, who had been sick for some days and had vomited incessantly, had a copious evacuation of the bowels, passing per rectum an enormous quantity of popcorn which she had eaten some days before. Here is a case which, had I seen a few hours earlier, would certainly have been operated upon. (2) In another case in which I was called in consultation there was loss of appetite, constipation, but no vomiting. I diagnosed an obstruction of the large intestine. An operation was refused and the patient died, and the post-mortem examination showed a carcinoma of the colon. (3) A woman was seized the day before I saw her with bloating, constipation and pain. When I saw her she was collapsed, dying, and yet in this case post-mortem examination showed no obstruction. The omentum and intestines were infiltrated with a carcinomatous deposit, and yet in this case the patient was well forty-eight hours before she died. The exact diagnosis is very, very difficult to make. I should operate in almost all cases in which the intestinal obstruction could be definitely diagnosed, although it is true that some cases would be operated upon which would get well without an operation. The operation often comes too late. It is difficult to determine exactly where the obstruction is. The obstructions in the large bowel are due usually to hernia or intussusception. In obstructions in the large bowel you get less vomiting than when the small intestine is involved. If the patient vomit fecal matter there is always obstruction somewhere, although it must be remembered that brown vomit is not always fecal. The operation should not be postponed a minute after the vomiting becomes fecal. If you have no vomiting it is difficult to make out a positive diagnosis. Fecal vomiting is the only sure sign. The profession certainly allow too many of these cases to die.

Dr. Donald Maclean: I agree with **Dr. Walker** in his want of faith in country antiseptics if we view antiseptics through the mystery and paraphenalia which in times past have been thrown around Listerism and antiseptic surgery. All we want to do is to prevent septic infection, and this in the present day is best done by sterilized hot water. The subject of intestinal obstruction is deep and profound, and will often require the greatest skill and experience. I can heartily endorse the principal that the best chance for the patient lies in a cœliotomy. We should not, however, allow ourselves to operate upon moribund cases, because the surgeon and profession and other sufferers should be considered. I do not believe in operating upon cases due to malignant disease if the malignancy is positively made out and is not very much localized.

Dr. H. O. Walker: If there is a doubt as to the exactness of our diagnosis we should make a cœliotomy to confirm our suspicions.

Don. M. Campbell, M. D., Secretary.

STATED MEETING, APRIL, 12, 1893.

The President, FREDERICK W. MANN, M. D., in the Chair.

ADOPTION OF FEE BILL.

The association adopted the following fee bill:

This scale of charges is intended to guide, rather than govern, members. The maximum and minimum figures have reference to the degree of responsibility and time consumed in a given case, rather than to the circumstances of the patient, which may justify a lower or a higher charge.

All bills shall be considered due when services are rendered. Statements should be rendered monthly.

GENERAL PRACTICE.

Ordinary office prescription,	$ 1.00 to	$ 5.00
Investigation in office requiring considerable time, use of instruments, topical applications in diseases of eye, ear, throat, nose, urethra, bladder, uterus, rectum, redressing wounds or application of electricity,	2.00 to	25.00
Visits in city in regular attendance (day),	2.00 to	5.00
Visits in city in regular attendance after 8 P. M. and before 9 A. M.,	4.00 to	10.00
Visits in country, extra per mile,	2.00	

Single visits where no other attendance is required,	$ 3.00 to	$ 10.00
Written opinion or advice,	10.00 to	25.00
Subsequent letters,	2.00 to	5.00
Medical certificate in case of insanity other than court fee,	10.00 to	50.00
Opinion involving a question of law or attendance at court as an expert (per day),	25.00 to	100.00
Vaccination in office,	1.00	
Vaccination at residence,	2.00 to	5.00
Urinalysis by chemical or microscopical tests,	5.00 to	25.00
Microscopical examination of morbid tissues necessary to diagnosis,	10.00 to	100.00
Telephone consultation,	1.00 to	5.00
Extra for detention in critical cases of disease, per hour,	2.00 to	10.00
Visits in variola or other contagious diseases,	3.00 to	10.00
Visits in cases of poisoning,	10.00 to	20.00
Administering anæsthetics,	5.00 to	20.00
Consultation visits,	10.00 to	100.00
Subsequent joint attendance, per visit,	3.00 to	5.00

CONSULTATIONS.

All consultations are held for the patient's benefit. This is not only true in those cases in which the consultation is requested by the patient or his friends, but also in those cases in which it is asked for by the attending physician. All consultations are at the expense of the patient, and the burden of the fee can in no case rest upon the attending physician.

OBSTETRICS.

Ordinary cases of labor,	$15.00 to	$150.00
Turning or delivery by forceps or adherent placenta additional,	15.00 to	50.00
Embryotomy,	25.00 to	100.00
Consultation,	20.00 to	50.00
Assistant physician,	10.00 to	20.00
Primary perineorrhaphy,	10.00 to	50.00
Cæsarean section,	500.00 to	3,000.00
Symphyseotomy,	100.00 to	500.00

All cases of labor to include three visits—all other visits extra.

GYNECOLOGICAL.

Late perineorrhaphy or trachelorrhaphy,	50.00 to	500.00
Ovariotomy, cœliotomy, hysterectomy, abdominal and vaginal hysterorrhaphy,	500.00 to	3,000.00
Amputation of cervix, colporrhaphy, Alexander's operation, colpocleisis and operation for atresia of vagina,	100.00 to	250.00
Removal of tumors of labia, or of urethral caruncle, or of polypi, or curetting,	50.00 to	100.00
Vesico-vaginal fissure, operation for,	250.00 to	1,000.00
Regular office treatment, ordinary,	3.00 to	10.00
Examination and diagnosis of intra-abdominal tumors,	20.00 to	50.00

Dilatation of cervix in stenosis	$ 25.00 to	$ 100.00
Replacing of uterus, or fitting of pessary, . . .	10.00 to	25.00

OPERATIVE SURGERY.

Trephining cranium or spine, ...	200.00 to	1,000.00
Staphylorrhaphy, ...	200.00 to	1,000.00
Operation for hare-lip, ...	50.00 to	250.00
Extirpating mammary gland, ...	50.00 to	250.00
Cœliotomy (any abdominal section), ...	100.00 to	1,000.00
Extirpation of large or complicated tumors, . . .	150.00 to	1,000.00
Extirpation of small tumors, ...	25.00 to	200.00
Nephrectomy or nephrotomy, ...	500.00 to	1,000.00
Operation for internal or external hæmorrhoids, . .	50.00 to	300.00
Removal of polypus of rectum, or operation for fistula in ano, ...	50.00 to	200.00
Operations for radical cure of hernia, or for strangulation,	250.00 to	1,000.00
Reduction of strangulated hernia by taxis, . . .	25.00 to	50.00
Selecting and adjusting truss, ...	10.00 to	25.00
Operation for radical cure of varicose veins, . . .	50.00 to	250.00
Aspirating joints, abdomen or thorax, ...	50.00 to	250.00
Operation for necrosis of bone, ...	50.00 to	250.00

LIGATIONS.

Ligation of subclavian, iliac, femoral, axillary or carotid, arteries, ...	100.00 to	1,000.00
Ligation of popliteal or posterior tibial arteries, . .	75.00 to	250.00
Ligation of brachial artery, ...	50.00 to	100.00
Ligation of all other arteries, ...	25.00 to	100.00

RESECTIONS.

Resection or removal of maxilla, shoulder, elbow, ribs in empyema, femur, knee, or ankle-joint, ...	100.00 to	500.00

AMPUTATIONS.

Amputation of shoulder-joint, ...	200.00 to	500.00
Amputation of arm, or thigh, ...	100.00 to	300.00
Amputation of forearm, hand, or leg, ...	100.00 to	200.00
Amputation of fingers or toes, ...	25.00 to	100.00
Amputation of hip-joint, ...	500.00 to	3,000.00

FRACTURES.

Fracture of nose, ...	25.00 to	150.00
Fracture of inferior or superior maxilla, ...	25.00 to	250.00
Fracture of clavicle, scapula, coracoid or coronoid process, humerus, elbow-joint, radius or ulna, or small bones,	50.00 to	500.00
Fracture of ribs, ...	50.00 to	100.00
Fracture of femur, patella, fibula, or tibia, . . .	50.00 to	150.00

DISLOCATIONS.

Dislocation of maxillary bones,	$ 10.00 to	$ 50.00
Dislocation of shoulder or arm,	20.00 to	50.00
Dislocation of wrist, or ankle,	10.00 to	25.00
Dislocation of fingers or toes,	5.00 to	10.00
Dislocation of hip or knee,	50.00 to	100.00
Dislocations, old, or ankylosis,	25.00 to	200.00

GENITO-URINARY AND VENEREAL DISEASES.

Syphilis, in advance,	50.00 to	300.00
Gonorrhœa, in advance,	25.00 to	100.00
Syphilis or gonorrhœa, each subsequent prescription,	2.00	
Operation for removal of stone in the bladder,	100.00 to	5,000.00
Operation for removing foreign bodies from the urethra,	50.00 to	150.00
Operation for perineal urinary fistula,	50.00 to	100.00
Operation for internal urethrotomy,	25.00 to	100.00
Operation for external urethrotomy,	100.00 to	500.00
Operation for treatment of urethral stricture by gradual dilation (each sitting),	3.00 to	25.00
Operation for phimosis paraphimosis or circumcision,	50.00 to	100.00
Operation for radical cure of hydrocele, or varicocele,	50.00 to	250.00
Operation for palliation of hydrocele (tapping),	10.00 to	50.00

EYE.

Operation for extraction of cataract,	200.00 to	1,000.00
Operation for decission,	50.00 to	200.00
Operation for artificial pupil,	100.00 to	300.00
Operation for removing foreign bodies from the internal portion of the eye,	100.00 to	300.00
Sclerotomy,	100.00 to	200.00
Operation for strabismus (each eye),	50.00 to	100.00
Operation for advancement of muscle,	100.00 to	200.00
Operation on lid for trachoma (each eye),	50.00 to	100.00
Operation for pterygium (each eye),	25.00 to	50.00
Canthotomy (each eye),	25.00 to	50.00
Operation for tumor of lids,	10.00 to	25.00
Operation for opening of lachrymal duct,	25.00 to	50.00
Operation for enucleation,	100.00 to	200.00
Glass fitting, ordinary,	5.00 to	25.00
Astigmatism,	10.00 to	25.00

EAR.

Opening of mastoid bone,	200.00 to	1,000.00
Removal of foreign bodies, or polypi,	10.00 to	25.00

THROAT AND CHEST.

Critical examination of lungs,	10.00 to	25.00
Tracheotomy,	50.00 to	500.00

Intubation of larynx,	$ 15.00 to	$ 50.00
Removal of laryngeal tumors,	50.00 to	500.00
Removal of adenoid vegetations,	25.00 to	100.00
Excision of uvula, or tonsil,	5.00 to	10.00
Excision of both tonsils,	10.00 to	20.00
Removal of nasal tumors,	10.00 to	200.00
Operation for deflected septum,	10.00 to	100.00
Application of Galvano-cautery (each),	5.00 to	20.00

DON M. CAMPBELL, M. D., Secretary.

EDITORIAL ARTICLES.

SURGICAL STATISTICS.

THE errors into which the statistical method imperfectly applied may lead the surgeon have seldom been more ably exposed than in the paper DR. T. A. MCGRAW contributes to the present number. The art of lying by means of figures, has been so assiduously cultivated as to be one of the necessary embellishments of modern life. More than at any time before, may it be said "you can prove anything by statistics except the truth."

The surgeon who seeks to justify operative measures by an appeal to statistics is actuated by a praiseworthy motive; he desires to substitute scientific exactness for empiricism in the application of his art. Exact science consists in quantitative prevision as opposed to simple qualitative prevision in which ordinary knowledge consists. Science differs from knowledge in the supremacy of its quantitative sanctions over those of a qualitative kind. When the quantitative sanctions, however, are lame and imperfect it is questionable whether the expedients they indicate are of a higher value than those afforded by ordinary judgment and knowledge.

Modern medical and surgical statistics are all incomplete and imperfect. There is no operation of which all the statistics have been or can be collected. The generalizations which are based upon statistics can only apply to the range of cases from which they are compiled. Yet, such as they are, these statistics afford indications of the highest value. Error, however, inevitably creeps in whenever it is sought to invest with absolutism the dicta surgeons base upon them.

LITERATURE IN THE SICK-ROOM.

THE physician acquires a large experience of things in general from the unusual opportunities of contact with the varied phases of social life his profession affords him. It would be interesting to ascertain from recorded observation exactly what form of literature experience indicates as best fitted for the sick-room. Whether sickness impair the literary judgment, whether invalids exhibit uniformity of literary taste, and, if impairment ensue, whether convalescence restores and reëstablishes the literary faculty.

When the physician enters the room of his patient afflicted with some painful malady and finds, as he so frequently does, the bed bestrewn with illustrated comic weeklies, he must feel that the immediate friends have not been guided by intuitive wisdom in providing for his patient's mental diversion. There is no question that this form of literature fulfills a valuable purpose in modern life. Its existence vouches for its necessity. Its absence would create a distinct void. There is a question, however, whether it be preferable reading for the indisposed. The sense of humor is least easily evoked in painful conditions, and mental and bodily depression scarcely conduce to an appreciation of the grotesque.

A vast amount of discrimination would be needed by one who undertook to prescribe literary pabulum for his patient's mental condition. In literature the physician must always recognize one of his most valuable resources for counteracting the tedium and monotony of the sick-room, but how shall this be employed? There is certainly crude ineffectiveness in the methods of those who in ailments of mind or body have recourse to the latest novel, or seek to beguile themselves with the inanities of comic journalism.

When he lost a favorite son GOETHE took to studying a new science. In great mental grief, as in great bodily anguish, you cannot divert, you must wrench the mind away. A course in science might act as a counter-irritant antagonizing the formation of acute habits of introspectiveness. In paralysis science would be an admirable pursuit, and might be prescribed advantageously in any of the irremediable sorrows of old age or middle life. Scientific reading, however, is not to everyone's taste, and an excellent substitute might be found in the study of a new language, a diversion within reach of the humblest understanding.

There will always be a large class of sufferers who have undergone disappointment, or whose feelings have been crushed or lacerated by cruel calamity, to whom the poets are a constant solace. The highest class of poets possess too eminent remedial qualities. They are imaginative and practical. With one class, as with HOMER, we can dwell with the immortals; with the other, as with SHAKESPEARE, find solution of urgent individual problems. Poets are, as SHELLEY said, "the hierophants of the unapprehended revelation," the fulness of their inspiration enables them to satisfy all modes of mind, and none can more surely seduce into forgetfulness the mentally disturbed.

The philosophers should not be forgotten. SCHOPENHAUER is appreciated when the liver is torpid. The Stoics give good counsel and can almost delude into the belief that nothing has been lost, besides being themselves such eminent examples of practical fortitude as aptly to instill a spirit of resignation, which bears under constraint and bends under the inevitable. Satisfying even a deeper need than that to which philosophy can minister, literature of a religious kind will, of course, be found of universal efficacy, but for a spiritual craving independent of the fluctuations of the reasoning spirit, the physician will advise with caution, feeling that in this matter the individual's own needs must always constitute his most reliable mentor.

EDITORIAL BREVITIES.

ASYLUM PHYSICIANS AS PARTY PENSIONERS.

IN the *American Journal of Insanity* is an excellent article dealing with the pernicious custom, prevalent in many states, of changing the appointments in insane asylums at each change of administration. DR. HACK TUKE, in a recent communication alluding to the removal of **Dr. Dewey** from the Kankakee asylum by **Governor Altgeld**, of Illinois, says: "The old country has many faults. It may learn many things from America. There is, however, one offense of which it is not guilty—that of making changes in the appointments held by medical men at the head of public institutions on a change of government." This evil, countenanced by the administration of an enlightened state, should receive unqualified denunciation by the medical societies, medical journals and every exponent of professional opinion.

THE TREATMENT OF APPENDICITIS.

Frederick Treves, in an article contributed to the *British Medical Journal*, containing reports of fourteen cases of successful operations for relapsing typhlitis, summarizes the indications for the operation in a conservative manner, as compared with some American operators. The operation, he maintains, should be done in cases where the attacks have been very numerous; where the attacks are increasing in frequency and severity; where the last attack has been so severe as to place the patient's life in danger; where constant relapses have reduced the patient to the condition of a chronic invalid and rendered him unfit to follow any occupation; where, owing to the persistence of certain local symptoms during the quiescent period, there is a probability that a collection of pus exists in or around the appendix.

THE BUCHANAN TRIAL.

The Buchanan trial, which has been an event of recent public interest, will long be notable in the annals of jurisprudence for the introduction of a new class of toxicological evidence, that dealing with the ptomaines. **Dr. Victor C. Vaughan**, of Michigan, offered very important evidence on the coloring reactions of certain ptomaines, which will probably influence the testimony in all future cases of alkaloid poisoning.

MEDICAL NEWS.

Moscow has fifteen medical societies.

Dr. Ceccarelli, physician to the Pope, is dead.

Paris is to have a hospital for phthisical patients.

Movable hospitals will be a feature of the World's fair.

Dr. J. J. Mulheron has returned to Detroit from Europe.

Degrees in public health will be conferred by Oxford university.

Dr. Eugene Smith has returned to Detroit after an extended tour in Europe.

The honorary degree of D. C. L., has been conferred on Dr. Donald Maclean by Queen's university, Kingston, Ontario.

The bogus diploma merchant, "Dr. Booth," of New York, has been sentenced to the penitentiary for a period of six months.

A medical expert, according to the supreme court of Wisconsin, is one experienced in the branch of medical science on which he professes to testify.

SIR ANDREW CLARK has been re-elected president of the Royal college of physicians.

RUSSIA has suffered a very high rate of mortality from cholera during the past winter.

TOKIO contains more than sixty ophthalmologists. They recently organized a social scientific society.

THE Manhattan clinical association is the title of an organization recently founded in New York city.

THE medical practitioners in England, Ireland and Scotland number thirty thousand five hundred and ninety.

THE British medical association will hold its sixty-first annual meeting at Newcastle-on-Tyne, August 1, 2, 3 and 4, 1893.

ENGLAND has four thousand eight hundred and seventeen registered dentists, about twenty-five per cent. of whom are graduates of dental colleges.

A MARINE biological laboratory, to be maintained by the national government, is a project advocated by Professor C. O. Whitman, of the Chicago university.

DR. HAL C. WYMAN has returned to Detroit. The Doctor was given a dinner in honor of his arrival by the faculty of the Michigan college of medicine and surgery.

DR. G. W. STONER, recently of the marine hospital, Detroit, but now of Baltimore, has been delegated to inspect Hogg Island, Maryland, for quarantine purposes.

DR. KEELEY was reported to have sold his gold cure to a syndicate for ten million dollars. This report is now stated to be false and only issued to bolster up the concern.

ARKANSAS will make an effort to suppress prostitution. A bill which imposes heavy penalties on inmates of houses and negligent police officers has passed the senate of that state.

A SANITARY CONVENTION, to be held under the auspices of the state board of health, will convene at Stanton, Michigan, on Thursday, April 27, and continue its sessions for two days.

THE Illinois state medical association will hold its forty-third annual meeting at Chicago, on May 16, 17 and 18, 1893. The Missouri state medical association will meet at Sedalia on the same dates.

PENNSYLVANIA now requires four years' study before entering upon the practice of medicine. The legislature recently passed a bill establishing a medical council and three state boards of medical examiners.

THE Ohio medical college has been sued for one hundred and fifteen thousand dollars. The suit is brought by the Amick chemical company because of derogatory statements made concerning its treatment of tuberculosis.

SOUTH DAKOTA has enacted a law which requires that physicians who apply for a license to practice medicine in that state shall be graduates of a medical school which exacts three full courses of six months each in separate years.

Baron Albert Rothschild in commemoration of the death of the Baroness, has given half a million florins for the purpose of founding a hospital in Vienna for the treatment of persons suffering from cancer. The demise of the Baroness was caused by this disease.

The associated physicians and surgeons is the name of a corporation that has been organized in New York "for the purpose of performing the clerical, financial and legal work necessary to the proper conduct and protection of the business affairs of medical practitioners."

The health department of New York city has paid nine hundred and sixty dollars for a portable disinfecting machine. It is drawn by horses, and can be taken in front of any infected house to disinfect clothing, bedding, etc. The invention is of Hamburg origin, where it was used effectively during the recent epidemic.

Power to analyze patent or proprietary medicines is given the state board of health in a bill now pending before the New York legislature. The introduction of another bill pertaining to these worthless compounds makes it a misdemeanor to sell or offer them for sale without the approval of the state board of health or the prescription of a physician.

After an official service of twenty-seven years, dating from the inception of the institution, Dr. Joseph M. Cleveland has severed his connection as medical superintendent of the Hudson River state hospital, located at Poughkeepsie, New York. Imparied health rendered the resignation necessary. Dr. Charles W. Pilgrim is the new incumbent.

Dr. Frederick C. Woodburn, 399 College avenue, Indianapolis, Indiana, has been appointed secretary of the Mississippi valley medical association to succeed Dr. T. V. Fitzpatrick, of Cincinnati, Ohio, who resigned because of pressure from other duties. Also Dr. G. J. Cook, of Indianapolis, has been appointed chairman of the committee on managements.

Do not hesitate, but at once apply for membership in the American pharmaceutical association. There is no initiation fee and the volume of annual proceedings alone is worth much more than the price of annual dues. Blank applications and full information can be obtained by addressing the chairman of the committee, Dr. H. M. Whelpley, 2,342 Albion place, Saint Louis, Missouri.

The Cincinnati sanitarium, a well-known private asylum, located at College Hill, Ohio, was the scene of a disastrous fire on April 6. The main building was entirely destroyed, and it is thought the damage will exceed one hundred thousand dollars. Although two hundred patients were in the institution no lives were lost. Ignition occurred from a hot soldering iron in the hands of a careless tinner at work on the roof.

The sanitary league of the District of Columbia is a new aid to hygienic enterprise recently organized in Washington by Dr. J. S. Billings, *et al.*, and which has for its object a house to house inspection, the improvement in disposal of sewage, the prevention of the contamination of the water supplies, and the removal of conditions which would become the source of danger in the event of the appearance of cholera.

THE Berlin medical professional union recently held a meeting and resolved against the dispensary abuse in the following terms: "The medical men assembled to-day declare that the efforts at reform in the matter of the Berlin polyclinics must be directed first and foremost to the keeping away of patients who are able to pay from these institutions, so far as this is compatible with the aims of medical instruction, and entrust the further conduct of the agitation to the professional union."

MERCY HOSPITAL (BIG RAPIDS) REPORT.—There were three hundred and seventy-nine patients treated in the hospital during 1892, exclusive of the forty-one patients in the institution at the beginning of the year. Total number treated in the hospital, eight thousand one hundred and ninety-one. There were eighty-seven surgical operations performed in the hospital during the year, considering as operations only such procedures as involved division of the continuity of the skin or mucous surface, and not including the reduction of fractures. Of these, eighty-four were performed by the hospital surgeons, and three by surgeons not connected with the hospital.

GOVERNMENT APPROPRIATION FOR THE PAN-AMERICAN MEDICAL CONGRESS.—Early in the last session of congress the secretary of the treasury and the secretary of state jointly recommended that an item be inserted in the sundry civil bill appropriating fifteen thousand dollars for the entertainment of the Pan-American medical congress. The item was rejected by the house committee on ways and means, but was reintroduced in the conference committee by Senator Gorman, under whose able championship it was agreed to, and became a law. The medical profession will not soon forget this considerate act on the part of the senator from Maryland.

DR. M. V. BALL, physician of the state penitentiary of the eastern district of Pennsylvania, has not employed alcoholic liquor in the therapeutics of that institution during the past year. He regards its advantages as a medicinal agent *nil*. Concerning the use of tobacco, he has this to say in his report: "We believe the time will come when tobacco will be prohibited in prisons, and we would like to see it come soon. There are good reasons, from a medical standpoint alone why its use should be discontinued. In former times tobacco was allowed only with the doctor's consent, but now it is impossible to prevent those from using it for whom it is positively harmful."

A FEATURE of the homœopathic exhibit at the World's fair will be a record of vital statistics purporting to show the ratio of mortality under homœopathic treatment as compared with that under regular treatment. Concerning this homœopathic project the *New York Sun* has this to say: "We may as well notify them that, if such an investigation is to command public respect, it must be prosecuted with the assent, and under the supervision of representatives of all the schools of medical practice. If these representatives of the various systems of medicine, coöperating in good faith, carrying on their researches in a scientific spirit, and seeking the truth regardless of consequences, should be able to make and sign a report that the practitioners of any one school are more successful in the treatment of contagious maladies than those of the other school or schools, such a report would assuredly have a powerful influence upon the whole medical faculty, as well as upon the community at large."

Grand Rapids Physicians go to Law.—There was a celebrated dinner of the academy of medicine at Grand Rapids some time ago, out of which some unhappiness has arisen. Dr. A. J. Pressey has charged Dr. F. J. Groner with making uncomplimentary remarks concerning an honorable member of the medical fraternity of that city, which charge has led to the Doctor's name being erased from the roll of the academy. Dr. Groner has indignantly repudiated this charge in the forcible way of suing his accuser for damages to the extent of ten thousand dollars.

The abolition of the communion cup in church service and the substitution therefor of individual cups is advocated by Dr. A. J. Longfellow, of Fostoria, Ohio, who introduced the following resolution at the last quarterly conference of the Methodist Episcopal church: *Resolved*, that the church purchase four hundred little wine-glasses, and each communicant receive the wine out of a glass no other person has used, and the bread be passed on baskets or plates, and that it be not handled or broken by the preacher. After the Doctor had explained the possibilities of contagion from the old method of partaking of communion the conference adopted the resolution without a dissenting vote.

The International Medical Congress.—The following steamship companies offer reduced rates to the profession: The North German Lloyd, 2 Bowling Green, New York, offers a reduction of twenty-five per cent. to the medical men going to and coming from the eleventh International medical congress, on steamer Werra, which is to sail from New York on August 5 and September 9, and on steamer Fulda, on August 19. Both these steamers sail to Genoa. The same reduction will be made for the return trips in October and November, on the same steamers, and for the company's Saturday (off Bremen, Sunday off Southampton) steamers. The Hamburg-American Packet company, 37 Broadway, New York, 125 La Salle street, Chicago, offer a reduction of twenty-five per cent., both out and return, for all its steamers during the Roman year 1893. The Compagnie Générale Transatlantique, 3 Bowling Green, New York, offers the rates which are allowed French officers, that is, sixty-three dollars and fifty cents for an eighty dollar accommodation and ninety-one dollars and fifty cents for a one hundred and twenty dollar accommodation. Five other lines decline to make any satisfactory arrangements.

The Detroit College of Medicine.—A large class was graduated from this institution at the annual commencement, May 4. The address to the graduates by Dr. C. A. Devendorf was able and eloquent and was listened to with great attention. A large banquet, in which four hundred guests participated, was given at the Wayne hotel. The following are the names of the newly qualified practitioners: *Graduates in medicine*—M. M. Acker, C. G. Anderson, J. Bettinger, E. W. Bolio, C. B. Bradford, G. E. Brown, E. S. Bullock, D. H. Burley, E. L. Emmons, F. R. Felt, F. H. Field, D. Graham, R. Graham, C. P. Gowman, H. W. Heasley, J. A Heasley, A. Leitch, C. W. Logan, C. R. Mabee, W. H. Masterson, R. B. Miller, D. J. McColl, J. J. McIntyre, J. Mackenzie, E. Rodd, A. E. Savage, R. L. Schorr, C. W. Shaver, R. D. Shearer, J. B. Sloan, G. Suttie, A. E. Thompson, F. J. Champney, A. Clark, G. W. Clark, M. Cobern, Jr., R. F. Corlett, J. N. Day, Jr., J. J. Delbridge, C. E. Doyle, G. H Drake, A. C. Drouillard, W. R. Hobbs, W. H. Hoppenrath, J. J. Howard, S. A. Howard, C. E. Hubbard, A. H. Johnson, O. C.

Joslen, W. C. Kitchen, A. C. Lee, A. A. McLarty, J. M. McMannus, J. L. McTaggert, E. J. Panzer, H. W. Partlow, G. W. Peart, M. W. Peters, J. J. Quinn, F. W. Robinson, J. S. Timpany, O. T. Toepel, W. H. A. Urquhart, T. H. Walker, A. J. Warren, H. S. Watson, T. Weston, P. S. Wilson, E. T. Wilson. *Graduates in pharmacy*—Harry W. Caldwell, Thomas Callan, F. C. Gidday, George S. Kirby, H. H. Rodenbaugh, F. A. Tiller. *Graduates in veterinary medicine and surgery*—J. A. Attridge, S. F. Barnes, J. B. Caughey, F. H. Ellis, Orton V. Sanford, J. A. Yoder, F. C. Wells, C. E. Anderson, M. F. Dunn.

THE American association of obstetricians and gynecologists will hold its sixth annual meeting at the Russell house, Detroit, Michigan, on Thursday, Friday, and Saturday, June 1, 2, and 3, 1893, under the presidency of Dr. Lewis S. McMurtry, of Louisville. Preparations are being made for the reception and entertainment of the members. The following is the preliminary programme as far as titles are announced: (1) The president's address—the present position of pelvic surgery, Dr. Lewis S. McMurtry, Louisville; (2) Abdominal fixation, Dr. Florian Krug, New York; (3) Endoscopic tubes for direct examination of the interior of the uterus and bladder, Dr. Robert T. Morris, New York; (3) Placenta Previa, Dr. William H. Wenning, Cincinnati; (5) What are the indications for abdominal section in intrapelvic hæmorrhage? Dr. M. Rosenwasser, Cleveland; (6) Treatment of Metritis, Dr. E. Pietranera, Cordova, Argentine Republic; (7) A plea for better surgery in the closure of the abdominal incision, Dr. H. W. Longyear, Detroit; (8) Remarks on the treatment after abdominal section, Dr. C. C. Frederick, Buffalo; (9) The management of the abdominal incision, Dr. Charles A. L. Reed, Cincinnati; (10) Dilatation of the cervix for dysmenorrhœa, Dr. E. M. Pond, Rutland; (11) Intrauterine pregnancy—with report of cases, Dr. George S. Peck, Youngstown; (12) A contribution to the study of ectopic gestation, Dr. E. Arnold Praeger, Nanaimo; (13) A few practical notes on the establishment of anastomosis between the gall-bladder and intestine for obstruction of the common duct with the relation of a case of obstruction of the common duct by small growth, Dr. James F. W. Ross, Toronto; (14) Vaginal hysterectomy for malignant disease, Dr. Rufus B. Hall, Cincinnati; (15) The care of pregnant women, Dr. John Milton Duff, Pittsburg.

RECENT PUBLICATIONS.

REVIEWS.

HAND-BOOK OF THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE THROAT, NOSE AND NASO-PHARYNX.*

THE name of the author of this hand-book is a guarantee of its excellence, let alone the fact that the exhaustion of three previous editions indicates the highly favorable opinion that has been formed of it by the profession at large.

In the present fourth edition numerous additions will be found, among which may be mentioned an entirely new chapter on "Influenza and Grippe," and also one on intra-nasal neoplasms. Six new and original engravings are also added.

Dr. Seiler's book is a complete account of those disorders which usually pertain to the throat specialist. The general reader will find a vast number of practical suggestions scattered through the pages of the manual which will save him much trouble and disappointment if followed. The book is in every way excellent and its popularity is a genuine result of its true worth.

* By Carl Seiler, M. D., instructor in laryngology and lecturer on diseases of the upper air passages in the university of Pennsylvania, etc. Fourth edition, thoroughly revised and greatly enlarged. Illustrated with two lithographic plates, containing ten figures and one hundred and seven engravings. 12mo: four hundred and fourteen pages. Cloth, $2.25. Philadelphia: Lea Brothers & Company, Philadelphia, 1893.

AN INTRODUCTION TO THE STUDY OF DISEASES OF THE SKIN.*

Dr. Pye-Smith has been for some time known as a writer on skin diseases principally from his able contribution to Hilton Fagge's work on the practice of medicine. The present hand-book is a reprint of much contained in that contribution. It presents in a compact and convenient form an epitome of dermatology. The author's experience as physician to the cutaneous department of Guy's hospital gives him an authoritative position on the matter with which he deals. A section on formulæ is added at the close of the manual, and this will be of use to practitioners dealing with this troublesome form of malady.

* By P. H. Pye-Smith, M. D., F. R. S., F. R. C. P., physician to the department of cutaneous diseases in Guy's hospital, London. In one handsome 12mo volume of four hundred and seven pages with twenty-eight illustrations, eighteen of which are colored. Cloth, $2.00. Philadelphia: Lea Brothers & Company, 1893.

THE ELEMENTS OF HUMAN PHYSIOLOGY.*

This is a small compact text-book of physiology which will meet the wants of students in a satisfactory manner. It is a volume of some five hundred pages, in which the elements of physiology are very carefully reviewed after an admirable introduction. The functions of the body are one by one elucidated. All statements referred to are on an experimental basis. The results of recent work are incorporated in the text and placed before the reader in a plain and comprehensible manner. Anatomy and histology are excluded, although the author admits a knowledge of the body and its structure must necessarily go hand in hand with a knowledge of its functions.

The text-book will be found to be attractively and lucidly written.

* By Ernest H. Starling, M. D., M. R. C. P., joint-lecturer on physiology at Guy's hospital, London. One hundred illustrations. Cloth. Price, $2.00. P. Blakiston, Son & Company, Philadelphia.

ELEMENTARY PHYSIOLOGY FOR STUDENTS.*

"Whoever speaks or writes for the public ought, in my opinion, doubly to examine just now how much of that which he says is objective truth. He ought as far as possible to have all inductive extensions which he makes, all conclusions arrived at by the laws of analogy, however probable they may seem, printed in small type under the general text, and to put with the latter only that which is objective truth."

It is these words of Virchow's which form the principle upon which this book has been written. Presenting concisely all the facts of the science of physiology, doubtful theories have been left out or placed in "small type." The manual is excellently arranged and amply illustrated, and will be found a substantial aid to the student engaged in acquiring a knowledge of this most necessary science.

* By Alfred T. Schofield, M. D., M. R. C. S., late house physician to the London hospital; special lecturer National health society. In one handsome 12mo volume of three hundred and eighty-five pages, with two hundred and twenty-seven engravings and two colored plates. Cloth, $2.00. Philadelphia: Lea Brothers & Company, Philadelphia.

DISEASES OF THE SKIN.*

A MANUAL of dermatology forms the latest addition to the excellent series of manuals known as the "Students' Quiz Series." Dr. Ransom's contribution seems to possess the excellent qualities which have marked previous numbers—lucidity of expression, compactness of form and absence of the non-essential. It will doubtless be valued by students seeking help in this difficult department of medicine.

* A manual for students and practitioners. By Charles C. Ransom, M. D., assistant dermatologist, Vanderbilt clinic, New York. The Students' Quiz Series. Price, $1.00. Cloth. Lea Brothers & Company, Philadelphia.

MEDICAL PROGRESS.

MEDICINE.

SLEEP.

SLEEP, as the poet has designated it, "nature's sweet restorer," is one of those psychological conditions which seem to constitute a link between life and death. The actual condition of sleep, however, appears to be a phenomenon which is most difficult of explanation. If sleep is sound and undisturbed, all the sensory functions of the body appear to be in complete abeyance, while the animal organism continues to perform its various functions with renewed vigor. It is, in short, complete rest from nervous and mental activity, and by it all the functions of the body recover from the fatigue which they have been undergoing, and the system at large seems to accumulate fresh vigor and energy for the work it has to perform. The condition of sleep may be described as a period of unconsciousness, so far as the motor and sensory powers are concerned, and in which the organic functions relating to nutrition, circulation, and respiration concentrate all the powers of the economy in the performance of their various duties. In this condition the various functions which are essential to life seem to become refreshed and their activity invigorated, while the muscles and thinking powers, in consequence of their nutrition being increased at the same time their energies are not called into play, regain strength, vitality, and power which had been previously impoverished by the fatigue which they had undergone. It is difficult to explain what is the actual physiological condition of the brain and of the sympathetic nerves during the epoch of sleep. It would appear, however, from analogy and from inference, that they are not in a state of anæmia, as has so often been supposed, but rather that their blood-supply is quite as copious as during the period of wakefulness, and that the brain is absorbing more actively the contents of the blood peculiarly adapted to its own particular requirements, and thus laying in a store for the expenditure which it will be called upon to make in the hours succeeding the repose which it has been indulging in.

It has been stated that sleep is the consequence of exhaustion of the usual nervous stimulant which has been exercised in the waking hours. Would it not be very much more natural to suppose that sleep is of the same nature as hunger, and that the nervous apparatus requires food to enable it to recuperate itself after a considerable fast? Sleep, in short, seems to act much in the same way upon the nervous system as food does to a physical frame, or rest does to the fatigued body, the first and the last, however, taking advantage of the functions of digestion and assimilation, and abstracting from these the portions of nourishment which are essential to the requirements of their different structures and in their recuperation from the fatigue which they have undergone. It seems to be beyond doubt that the nervous and muscular systems take advantage of rest and sleep to enable them to devote their powers to the absorption of nourishment, as it is impossible for them to attend to their own requirements during the periods in which they are in action and under the control of the will of the individual. Sleep, however, or what corresponds to sleep, may be the result of circumstances quite independent of fatigue; it may, in fact, supervene upon exposure to intense cold, or to the action of certain drugs which obliterate the sensations, but which at the same time interfere with the action of the nutritive forces—namely, the absorption of nourishment to provide for the future requirements of the body and for its invigoration. Hence such sleeps are liable to end in death, if the causes which have produced them are sufficiently energetic, or if proper measures have not been adopted to avert the fatal consequences. Thus we know that exposure to severe cold produces a drowsiness by paralyzing the nervous system; also that drugs, such as opium and other narcotics, produce a similar effect if the dose has been sufficiently large, or if the vital powers are not sustained or excited by proper remedies until the effects of the poison have passed away.

Many substances have been brought into use with a view of inducing sleep when nature's efforts have been unavailing, or when the nervous excitement present has frustrated these efforts. The most useful of these agents is sulphonal, which seems to act in such a manner as to render the nervous system oblivious to the conditions which preclude sleep, and thus enables nature to step in and supply the long-felt want. The sleep thus produced, although probably artificial at first, seems to merge into natural slumber, and thus the bodily requirements are supplied, the energies of the individual resuscitated, and the body refreshed. Other substances, such as chloral, chloralamid, bromidium, etc., have also some considerable reputation in sleeplessness, yet they do not seem to exercise the beneficial effects which sulphonal undoubtedly does.

The amount of sleep varies very much, the infant requiring the most; indeed its life should be made up pretty much by sleeping and drinking during the first six or eight months of its existence. As time advances, however, the time necessary for refreshment by sleep becomes gradually less, the adult requirements being from six to eight hours, but many indulge in a longer period of rest. Six hours, however, may be considered quite sufficient for any one in active exercise and good health, but there is a kind of enjoyment in the indulgence of sleep, which is very liable to be taken advantage of and made the excuse for a longer period in bed than is actually necessary. It is of great importance that an individual whose mind and body are actively engaged can take advantage of snatches of repose at any convenient time, and many men whose brains have been the most active have possessed this peculiar faculty, which has served them in good stead in many emergencies. Among these may be mentioned Napoleon and other generals and admirals who could not take advantage at regular times of indulging in a long period of repose.

It is a curious circumstance that sleeplessness is often the effect of a too active and energetic exercise of the mental faculties. The mind seems to be unhinged by the excessive strain which is brought to bear upon it, and in consequence is unable to settle down to the rest which is so essential to it. Over-indulgence in stimulants, also, by exciting the nervous apparatus, in many instances destroys the power of sleep, and hence aggravates the mischief which the poison has already produced. In many instances sleeplessness, when not due to these factors, is caused by an absurd idea that it is wrong to take food before going to bed, whereas, if such individuals would indulge in a slight refreshment before retiring, they would find that their sleep is not only more refreshing, but also more easily produced, and becomes more lasting if the stomach contains a little light nourishment. Many people who waken at certain hours of the morning and are unable to fall asleep again would do well to take a little food, such as the white of an egg switched up with a little milk, or even a drink of milk itself, and they would find that sleep, which before had been courted in vain, would come without any difficulty. Others, again, who sleep with their mouths open, and therefore necessarily induce a dry condition of the mucous membrane, would, by simply getting out of bed and taking a drink of water, enable sleep to take possession of them, for which, probably, they had been wishful for a considerable time before adopting this very simple device. Sleep is, however, frequently disturbed by the presence of some foreign matter within the alimentary canal. This is especially the case in children who are troubled with worms, or who are subject to constipation. In these circumstances the sleep is not only interfered with, but actually disturbed by terrible dreams, which may in many instances assume the character of delirium, and this is usually accompanied by a high state of fever, which in olden times was called remittent fever. When this is the case it will be found that an enema composed of a desert-spoonful of salt, dissolved in a breakfast-cupful of warm water and injected well up into the bowel, will have an almost immediate effect in alleviating the painful and alarming symptoms.

Somnambulism, or sleep-walking, is a condition of the nervous system brought about by some irritant within the digestive tract, and is almost invariably due to indigestion or sluggish condition of the lower bowel. People who are addicted to such a disagreeable and dangerous habit should be particularly attentive not only as to their diet, but to the condition of their digestive organs and to the state of their bowels.—Robert Bell, M. D., Glasgow, in *International Medical Magazine.*

LEGAL LIABILITY OF A PHYSICIAN UPON WHOSE CERTIFICATE A SANE PATIENT IS COMMITTED TO AN INSANE ASYLUM.

The present legal status of insanity is the fruit of a more acute and thorough investigation of its phenomena in the light of riper experience and a greater abundance and variety of facts, leading to a more precise definition of legal accountability in the various forms of mental impairment.

The changed views of medical scientist respecting the nature of this appalling malady, in its different manifestations, have produced changes in treatment, and these changed medical notions have naturally reacted upon the law and given rise to corresponding changes in the judicial aspects in which insanity was formerly viewed. Accordingly, in questions affecting the civil rights and the extent of criminal responsibility in the insane, the harshness of the common law has been toned down by a more enlightened judicial interpretation, or that law itself has been superseded by more humane statutory provisions.

The same spirit pervades the judicial construction of these statutes, or "lunacy laws," as they are sometimes called, and thus becomes the source of many interesting questions affecting the legal responsibility of the medical practitioner in the performance of the duties imposed upon him by those statutes. Actions for damages against physicians, growing out of the statutory provision requiring an examination of an alleged insane patient with a view to ascertaining whether he is a fit subject for detention in an insane asylum are becoming more and more frequent; and the question is often asked, What is the legal responsibility of a physician for giving a false certificate of insanity?—that is, for signing a certificate of insanity by virtue of which a person is committed to an insane asylum, and it subsequently appears that such person was not insane at the time the examination was made.

The case thus presented, where the physician examines the patient with respect to his sanity, and merely signs the required certificate without doing anything further towards procuring the confinement of the alleged lunatic, may furnish two grounds of liability in the physician: (1) for the consequences to the patient that flow from the conduct of others acting under the authority conferred upon them by the certificate; and (2) for the consequences which ensue if he signs such certificate without exercising due care in making an examination of the patient; or, if, upon his own personal examination, he is not satisfied and fails to make due inquiries.

The ground of alleged liability in actions of this kind is based upon the jealous care with which the law guards the personal liberty of the citizen, and the severity with which it punishes any unwarranted infraction of this sacred right. But the mere fact that a physician makes a false certificate of insanity does not constitute such an infraction of this right as will render him liable in damages therefor, where he exercised due care in making the examination, and did not cause or procure the arrest and confinement of the patient in an insane asylum.

In a case in which this point was decided, the complaint alleged that the defendants, who were practising physicians, did falsely and maliciously certify in writing, under oath, that they had examined into the state of health and mental condition of the plaintiff, and that in their opinion she was insane and a fit subject to be sent to the state asylum for the insane, by means of which false, fraudulent, and malicious certificate the defendants wrongfully, unjustly, and without probable cause, by procuring such certificate to be filed or lodged with the superintendent of the state asylum for the insane, caused and procured the plaintiff to be arrested and detained in prison for the space of two months. To this complaint it was objected that it does not allege that the defendants actually arrested or procured any one to arrest the plaintiff. The averment is that by means of their certificate they caused her to be arrested and imprisoned, but how or in what way the certificate and arrest are connected is left to conjecture. It does not appear how the making of a false certificate in this case affected the personal liberty of the plaintiff. The complaint discloses nothing which shows that the loss of liberty was the necessary consequence of the wrongful act imputed to the defendants. There is no averment that the defendants unlawfully caused or procured the arrest of the plaintiff.

In stating this objection the supreme court said: "They could not have caused her arrest by the mere making and filing of a false certificate. The certificate was not an order for her arrest, nor did it contain any request to any other person to deprive her of her liberty. The person upon whose petition she was admitted to the asylum might have made use of this certificate to effectuate his purpose, but the certificates of all the doctors in the land would not of themselves have restrained her of her freedom in the least degree.

"The charge that the defendants did the single act of making and filing the false certificate excludes the presumption that they did anything else to procure the arrest."

"The allegation that by means of such false certificate the defendants procured her arrest is an averment that the defendants' act was attended by a consequence which could not possibly have resulted from the mere making of a false certificate alone. It was necessary that some one should have petitioned for her admittance to the asylum, and that she should be actually arrested, neither of which acts is imputed to the defendants in the complaint. Neither defendant is alleged to have signed the request for her admission to the asylum, or to have procured another to do so. It does not appear how the false certificate aided in or procured her arrest, or that it was given with intent to enable some one else to procure the arrest, and used by complicity with the defendants for that purpose."

While, therefore, a physician may not be liable for the consequences that flow from the certificate founded on a reasonably careful examination of the patient, a responsibility may yet arise from the second source mentioned above,—carelessness or negligence in making the personal examination. Negligence is usually the main question in actions of this kind; and it should be observed that the burden of proof in such cases is on the plaintiff, the presumption being that the physician did his duty. Nor is the burden shifted by the mere fact that the certificate as to the insanity is false, as that is consistent with an honest mistake of judgment after the most careful examination and inquiries. Morever, such certificate is a privileged communication; and where a communication is privileged the plaintiff must not only show that it was not true but that the defendant physician had no reasonable grounds to believe that it was true. It must be remembered, however, that it is only when performing a legal duty imposed upon him that his communication is privileged; for, when not so acting, our courts have decided that it is clearly libelous for a physician to publish of another that he is "insane and a fit person to be sent to the lunatic asylum," or that "he is so disordered in his senses as to endanger the persons of other people if left unrestrained, and that it is dangerous to permit him longer to go at large."

But the point of special practical interest to the medical profession is to learn, by means of the facts which have appeared in evidence in cases hitherto adjudicated, just what conduct on the part of the physician in making his examination has been decided to be negligence. The consideration of this question, however, will be reserved for a future paper.—*International Medical Magazine.*

SURGERY.

ADAMKIEWICZ ON THE NATURE AND TREATMENT OF CANCER.

A COMMUNICATION on the nature and treatment of carcinoma assumes especial importance at this time, because the profound attention of investigators everywhere is being devoted to this subject. With the growing conviction of the infectious and parasitic nature of cancer, and the many researches towards the discovery of the specific parasite, it is but natural that the question of treatment should have been thrust in the background. Further, with the heated and apparently endless controversies waging about the sporozoan cancer parasite, it is a relief to note a work in which the questions at issue are approached from another stand-point. Such a work is the recently issued monograph of Professor Adamkiewicz ("Untersuchung Ueber Den Krebs Und Das Princip Seiner Behandlung." Wien. und Leipzig, 1893, page 12, 134), which represents the results of several years' research. The cancer problems are studied from the experimental and clinical stand-points, and the author carries the work to the extent of suggesting a remedy for this dreadful malady.

At the outset we are met with the statement that carcinoma is an infectious disease, closely allied to syphilis in its characteristics—in both diseases we have the primary seat of infection, and the secondary foci. A specific microbe has not been demonstrated with certainty in either of these affections, still we do not doubt the infectious nature of syphilis, and therefore, since carcinoma has so many points of similarity, we must also assign it to the class of infective diseases. The inadequacy of Cohnheim's hypothesis to explain the origin of carcinoma is clearly set forth. In considering the parasite of cancer, Adamkiewicz takes the position of Virchow, Baumgarten, Hauser, Klebs, Ribbert, Noeggerath, and those authorities who do not recognize the protozoan parasites of Wickham, Malassez, Sjöbring, Russel, Steinhaus, Pödwyssozki, and Sawtschehko; for he regards the "sporozoa" of these investigators as the products of degenerated or metamorphosed cytoplasm, and as altered nuclei. Similarly, his studies of bacteria in carcinoma were negative; that is, no specific microbe could be discovered in this neoplasm.

The interest and value of the work of Adamkiewicz lies in his experimental studies of carcinoma implantations, and particularly in the implantations in the brain. The subjects of these experiments were rabbits, and they were inoculated with small pieces of fresh, living carcinoma tissue, introduced into the brain substance. From the aseptic nature of these operations, and by culture tests, the absence of bacteria in the inoculation material was assured. In all cases in which true carcinomatous tissue was planted into the brain, the inoculated animal succumbed, usually dying within a few hours, never living more than two or three days. The phenomena preceding death were those of extreme irritation of the nervous centers—impeded respiration, incoördination, spasms, convulsions, and paralysis. In a series of control experiments it was ascertained that fresh normal animal tissues, sarcoma, adenoma, iron nails, glass pearls, and pieces of wood, produced no reaction in the brain. Caustic chemicals, as chromic acid, nitrate of silver, and caustic potash, produced death, the time varying from sixteen hours to nine days; the effect on the brain being a more or less extensive necrosis. Injections of pus from various sources were fatal after a number of days, the brain showing many purulent foci. In none of these cases, however, was the characteristic train of symptoms and the rapidly fatal ending of cancer implantation obtained. This led the experimenter to conclude that the carcinoma tissue exerted its fatal effect by a toxic action on the nerve centers, and an investigation of the poison of cancer was then undertaken.

By rubbing fresh cancer tissue in a mortar with sterilized water, and filtering, an opalescent, slightly alkaline liquid was obtained, which exhibited the poisonous properties of the cancer tissue when injected into the brains of rabbits. In the case of this cancer extract, the death of the poisoned animal was very rapidly produced. With both the cancer tissue and the aqueous extract, the brain was pale and showed no reaction when death was produced early; but when the fatal termination was more prolonged, a reaction of an inflammatory character was observed. Control injections of distilled water, weak salt solution, and well water, failed to produce death, though symptoms of a temporary cerebral irritation manifested themselves. Injections of a one-half per cent. solution of carbolic acid produced epileptic symptoms, the animal living; but a one per cent. solution of carbolic acid produced clonic convulsions, stupor, paralysis of the extremities, and death in a few hours. Cerebral injections of a considerable quantity of Koch's lymph induced transitory irritation symptoms, but were not fatal. Injections of cancer extract into the jugular vein produced rapid death. with the usual brain symptoms. From these experiments, Adamkiewicz is convinced that a toxic substance exists in fresh cancer tissue, and this substance he names "cancroin."

In studying further the effects of implantation of carcinomatous tissue, a very important observation is made by this investigator. After the death of the inoculated animal, the brain, together with the implanted graft of cancerous tissue, was cut into serial sections, stained with safranin and methylen blue after the method of Adamkiewicz, and examined microscopically. The sections exhibited a varying number of violet colored foci, distinctly marked off from the reddish nerve substance, and these foci lay in part in the cancer graft, and in part in the surrounding brain substance—often at some distance from the implanted tissue. From his examinations, Adamkiewicz was led to believe that these foci were composed of young cancer cells and cancer germs, which had infiltrated the tissues. The interstitial substance of the implanted graft appeared somewhat swollen, and the alveoli were occupied by the shrunken remains of the original carcinoma cells; and in many points in the interstitial substance, the "cancer germs" could be demonstrated, as if in the act of emigrating from their mother cells. The brain substance about these infiltrations appeared injured, and the author attributed this to the destructive action of the escaped germs. This wandering of embryonic carcinoma cells and carcinoma germs was particularly remarkable because of the rapidity of the process, the widely distributed metastatic foci all having developed in the interval between the implantation of the graft and the death of the animal—an interval varying from a few hours to two or three days. To establish the relations of this curious phenomenon to that which follows the ingrafting of normal epithelial structures, Adamkiewicz implanted pieces of fresh kidney into the brains of rabbits. No change in the epithelial cells could be observed; they were distinct and gave well defined staining reactions for some time; and there was no migration of the elements of these cells; and no metastatic foci. The kidney substance was eventually surrounded by leucocytes, and finally absorbed. The germs of the cancer grafts, then, possess the power of independent mobility, and exert an irritant effect on the brain tissue with which they come in contact—more than this, the brain substance removed from the metastatic infiltrations, becomes poisonous, so that, when inoculated into other rabbits, a piece of this brain tissue produces death, as did the original piece of carcinomatous tissue. In other words, the young carcinoma cells and the carcinoma germs possess the properties of independent organisms, resembling, in their mode of action, certain well known microbes. Now, these active young cells, and germs, escape from the mother cells of the implanted piece of carcinoma tissue; and, therefore, the mother cells must have the inherent tendencies of their offspring. Thus we are prepared for the stand taken by the author, when he asserts that the parasite of cancer is the cancer cell itself; and once more we are reminded of the views so long held by pathologists, that carcinoma metastases were produced by the transportation of the carcinoma cells, which was, after all, only another manner of expressing the conviction that the cancer cell was the infective element.

The cancer cell is an independent living organism, says Adamkiewicz, and because of its destructive action on the tissues of the living body, he calls it a "sarkolyte;" and since it resembles, in its formation and properties, the protozoan organisms belonging to the sporozoa, it is styled the "coccidium sarkolytus."

If we accept the hypothesis which makes the cancer cell the parasite of the disease, it allows an easy explanation of such phenomena as the origin of metastases, and the growth of transplanted carcinoma tissue. It would not be necessary for the transported carcinoma cell to carry with it the infecting microbe or coccidium; for the cell, being an independent organism, could originate a metastasis at its lodging place, by a reproduction of its kind. It could thus transpire, that a carcinomatous nodule could grow in an epithelial organ like liver, entirely independent of the cells of its host, and it would then be easy to understand why the cells of such an affected organ never take part in the new growth, but atrophy and perish at the advancing border of the neoplasm. The "formative irritation" theory of Billroth, the "asymmetrical mitosis" theory of Hansemann, the theories of Ziegler, Klebs, and of Pfeiffer, would be superfluous if the sarkolyte of Adamkiewicz was the carcinoma organism. The observations of Neggerath on the sexual chromatin substances of the nucleus of the carcinoma cells, are interpreted by Adamkiewicz as supporting his theory, since he conceives it probable that there must be a varying relation in the sexual nuclear substances of the lowly organisms, of which his "coccidium sarkolytus" is a type. "Now, if the cancer cell is the parasite of cancer, and cancer produces a toxic substance, then the cancer cell must be the place of formation of 'cancroin,' and 'cancroin' must be the metabolic product of the cancer cell." This proposition is especially demonstrated by the rapid degeneration of the infiltrated brain substance, and the induction of poisonous properties in the brain substance itself, as is seen in cases of cerebral carcinoma implantations.

The labors of Pasteur and of Koch have demonstrated the principle that the rational remedy against an infecting organism is its own metabolic product. Accepting this axiom, Adamkiewicz proceeded to a study of the therapeutics of carcinoma. In order to carry out this plan of treatment, it was necessary to ascertain the nature of the cancer poison. Adamkiewicz concluded that cancroin belongs to the group of toxines; but on account of the difficulty of not obtaining a sufficient quantity of the substance, it was impossible to make an accurate chemical analysis, and he was, therefore, obliged to resort to a comparative physiological study of other toxic extracts, in order to assign cancroin to its chemical position. Furthermore, the difficulty of obtaining a reliable and constant carcinoma extract for therapeutic purposes, made it highly desirable to find a more available substance of physiological action. By a careful series of experiments, this investigator found that cadaveric tissue, and the extract from undecomposed cadaveric tissue, possessed poisonous properties, and produced symptoms preceding death, which simulated in every way those induced by cancroin, and implanted cancer tissue. But "cholin," the alkaloid of cadaveric tissue, possessed no therapeutic properties. This led to the trial of the nearly allied vinyl base, "neurin," an ingredient of Liebreich's protagon as obtained from the brain; and in its physiological properties, neurin was found to resemble the cancroin of Adamkiewicz. Further experiments led to the adoption of neurin as the alkaloid for therapeutic purposes, and a trial of neurin in a case of epithelioma of the lip, apparently demonstrated its specific reaction against carcinomatous tissue—a reaction which very much resembled that of "tuberculin" on the lesions of tuberculosis. As the outcome of his investigations, and with the purpose of counteracting the irritant and possibly septic effects of the crude neurin, Adamkiewicz neutralized the vinyl base (neurin) with nitric acid, and saturated a twenty-five per cent. solution of this vinyl-citrate with carbolic acid. The phenol-vinyl-citrate, thus produced, was called "cancroin;" the original solution was prepared in three dilutions for clinical purposes, and its manufacture placed into the hands of one of the German chemical houses.

The monograph of Adamkiewicz is concluded by the clinical history of the twenty-five cases of carcinoma and cancroid which were subjected to the treatment by hypodermic cancroin injections. An interval of about two and one-half years has elapsed since the clinical studies were begun. From these reports, it appears that cancroin produces a rapid reaction in the carcinomatous tissue, often of an inflammatory and painful character. In the favorable cases, the primary reaction is followed by a neurosis of the elements of the cancer tissue, and, in some cases, this softening and disorganization of the tumor tissue was followed by a discharge of the necrotic carcinoma elements, together with a purulent fluid due to the reaction of the normal tissue elements against the dead carcinoma tissue. In the most favorable cases, the death and discharge of the tumor elements was followed by a reparative regeneration of the surrounding tissues. The cancroin injections appeared to exercise a marked tonic effect in several cases, the injections being followed by a diminished cachexia, improved nutrition, and increase of body-weight. On the whole, however, the results of cancroin injections, while apparently indicating a specific effect of the remedy on carcinomatous tissue, are not of a character to indicate a remarkable curative effect, as is even admitted by the author of the treatment. But it is too early to judge—certainly too early to condemn. We must hope, with Adamkiewicz, that in his new treatment the *principle* is correct, and that in due time the treatment may be so modified as to realize the sanguine hopes of its discoverer.

An extended critical summary of this work of Adamkiewicz is here impossible, for there are many statements of so startling and novel a nature that they cannot pass the sober judgment of careful investigation without a painstaking analysis. In fact, even on casual study, the work seems burdened by numerous hypotheses which rest on insecure foundations. The "coccidium sarkolytus" will be subjected to the same searching scrutiny as has been applied to the carcinoma coccidia of Wickham, Sjöbring, Podwyssozki and Sawtschenko, etc., and, in this critical study, we fear the parasitic cancer cell will share the fate of other hastily proclaimed carcinoma organisms. Even were we to admit this bold conjecture of Adamkiewicz, and recognize as a living parasite each one of the myriads of various carcinoma cells which present themselves to our view, how much nearer would we be to the question of the *origin* of this disease? From whence does the coccidum sarkolytus come? We would still be "breaking our heads" over the problems which have confronted Ziegler, Klebs, Hansemann, Noeggerath and others; and we would still find it necessary to call into requisition one of these very theories, which Adamkiewicz apparently disdains, in order to explain the origin and development of the sarkolyte. From a clinical standpoint, also, it is not probable that the cancroin of Adamkiewicz will receive the entire approbation of the profession; for, with the tragic disappointments of "tuberculin" before his eyes, the cautious physician will be slow to accept this new remedy. At the same time that it is full of rash hypotheses, the work of Adamkiewicz is of great importance, for it serves to direct the carcinoma investigations into a new, and apparently very promising field. The experimental studies, as inaugurated by this research, must be followed; and it must be evident that many new facts await the conjoined labors of careful pathologists, along this line. Moreover, the recent remarkable investigations on animal extracts as witnessed in the thyroid extract treatment of myxœdema, must indicate the promise which awaits the studies on cancer, in the direction laid down by Adamkiewicz.

MEDICAL MELANGE.

She Paid Her Bill.—In an out-door department of one of the London hospitals a very unusual case occurred. It was unusual in this way, at least: the doctor was able to collect his fee on the spot, at the very moment of the completion of his operation, and from a charity patient too! A woman was attending for "stricture of the rectum." She informed the surgeon that about two weeks before she had swallowed a sovereign and a half while "on a lark." The surgeon examined the rectum and removed three sovereigns from the stricture with his forceps at one grip.—*National Medical Review.*

UNDER the names tolypyrin and tolysal two substances, homologues of antipyrin and salipyrin respectively, are under trial therapeutically. The former is chemically paratolyldimethylpyrazolon, with the formula $C_{12}H_{14}N_2O$, being antipyrin with a methyl group in the para-position of the phenyl nucleus. Like antipyrin it forms a crystalline salicylate, to which the name tolysal has been given. This latter occurs in white crystals, which melt at 101° to 102° centigrades, are slightly taken up by water but very readily and abundantly by alcohol. Details of the results of the therapeutical trials so far are promised in the near future.

EXERCISE.—The Right Honorable Joseph Chamberlin, in a speech at Birmingham, in England, in presenting the prizes after an athletic competition, told his audience that he, personally, did not much believe in exercise. He then went on to say that he never rode a bicycle or a horse, or played cricket or foot-ball or tennis, or even golf, in spite of the fact that the latter game was considered almost indispensable for British statesmanship. He does not even walk if he can help it, and in fact, takes no exercise at all, in spite of which there is no doubt that he is in as good physical condition as could be desired.—*Boston Medical and Surgical Journal.*

TOADS AND THEIR POISON.—Popular myths die hard, even when science has done its best to dispose of them. One of these has reference to the poison capacities of the toad, "ugly and venomous," as Shakespeare has somewhat impolitely described the bactrachian. Popular belief usually endows the toad with the power of ejecting poison from its mouth in the form of saliva. But Boulenger has distinctly pointed out that the toxic element in the creature is situated in follicles of the skin along the back, whence secretion takes place under the influence of irritation. The Chinese have for long time made use of the secretion from the back of toads, but for what purpose has not been definitely explained. The secretion is obtained by prodding the animal in a vessel containing flour. Scientifically the same result is attained by a hypodermic injection of chloride of barium, which causes the toad to perspire freely. Its toxic effects, when administered to man or animals, resemble those of digitalis.—*Medical Press.*

A TALE OF A GLASS EYE.—One of the Rochester newspapers says that a physician of that city tells the story of his once having been summoned to the hospital late at night to assist his colleagues in the endeavor to resuscitate a man profoundly narcotized with opium. One pet method after another having proved ineffectual, the conviction was forcing itself on the medical gentlemen that the patient was dead. "Finally," the story continues, "the eldest of the party, a practitioner of thirty years' standing, walked over to the supposed corpse and, lifting the eyelid, looked long and searchingly at the eye. When he let go he at once proceeded to gather up his instruments preparatory to leaving. I thought that I could detect a slight respiration, though very faint, and asked him why he was leaving. 'The man's dead,' he answered, 'look at his eye.' I turned to make an examination, and sure enough the eyeball had a strangely glassy appearance, noticeable in cases of death by opium poisoning. I, too, was about to turn away when, to the surprise of all, out slid the eye and down it fell to the floor. It was glass. No one said anything, but we continued to work on the subject until nearly morning and we brought him around all right."—*New York Medical Journal.*

Gouty Affections of the Intestines.—Dr. Haig maintains that a large number of cases of colic, enteralgia, enteritis, and some which are clinically indistinguishable from typhlitis, are really due to a gouty irritation of the fibrous tissues in the walls of the intestine. From his personal experience, which first directed his attention to the matter, and the results of treatment in his own and other cases, he has been gradually led to the belief that the colic and enteritis produced by such metals as lead, mercury, zinc, copper, and manganese are due to gout of the walls of the intestines. It has been pointed out that these metals, and certain other drugs mentioned, form insoluble compounds with uric acid, and it is suggested that the urate of the metal, or other insoluble urate, is deposited in the walls of the intestine, and gives rise to the irritation in question. In Dr. Haig's case the attacks were brought on by cocaine, by mercury, and by cold. He further suggests that many cases of typhlitis have a similar origin, and that there is frequent clinical connection of this trouble with gout or rheumatism. As regards treatment, the drug which is most useful in all these conditions, salicylate of sodium, is also that which is by far the most useful drug in the arthritic irritations produced by urates. This drug, acting as a solvent of uric acid, will break up and remove the urate, with whatever metal it may be united, and at once relieve the irritation as in the case of the joints. The doctor's experience in these cases, and also in cases of lead colic, encourages him to hope that others will give it a thourough trial in similar cases, which he believes to be much more numerous than is generally supposed.—*Medical Press and Circular.*

Lessons in Dying.—Medical men have the reputation among the *profanum vulgus* of being "nervous" about themselves when they are ill, and it is no wonder if they are so, seeing that they are denied the bliss of ignorance as to the possible developments of apparently trifling symptoms. Captain Marryat tells us that when a boy he passed among his companions for a coward, not, as he is careful to explain, that he had less courage than they, but because he had more intelligence and therefore saw danger where they saw none. Knowledge, in fact, as well as conscience, doth make cowards of us all. But it will be generally admitted that a man who is keenly alive to the dangers of a battle or a pestilence, and yet nerves himself to face them in the cause of humanity, is more truly brave than one who exposes himself out of mere recklessness. In the same way, a medical man who, knowing himself to be smitten with a mortal ailment, yet goes on doing good while strength holds out, is entitled to all the more honor, as for him the hope of recovery, which, springing eternal in the human breast, buoys other men up to the very brink of the grave, does not exist. He knows that he is under sentence of death, without the possibility of reprieve. Many readers, no doubt, remember Thackeray's "fine and touching story" (in one of his *Round-*

about Papers) about a great doctor who, while ministering to the wants of crowds of sufferers, had a suspicion that there was something wrong with himself. So Doctor London, as he calls him, went to Doctor Edinburgh, who punched his comrade's sides and listened at his heart and lungs, and when he had done gave a prognosis of only a year of life. Doctor London came home, made up his accounts with man and heaven, and went about "healing and cheering and soothing and doctoring" as usual; and living "cheerful and tender, and calm and loving" among his family, to whom he said not a word as to his condition. "And it was winter time, and they came and told him that some man at a distance—very sick but very rich—wanted him, and though Doctor London knew that he was himself at death's door, he went to the sick man; for he knew the large fee would be good for his children after him. And he died; and his family never knew until he was gone that he had been long aware of the inevitable doom." We do not know who the hero of Thackeray's story—evidently "founded on fact"—may have been, but, *mutato nomine*, it might be told of very many members of our profession. Dr. Murchison and Dr. Hilton Fagge—to mention only the first names that rise to our memory—must have been fully aware of the sword of Damocles hanging over their heads by something even more brittle than a hair, and they both died, valiantly doing the work they had taken upon themselves. Another example, even more striking than that of "Dr. London," is related by M. de Goncourt. Trousseau became aware that he was the victim of cancer, an "autodiagnosis" which Dieulafoy was sorrowfully compelled to confirm. He went on, however, though eaten up by cares of many kinds, with unabated cheerfulness, seeing his patients in the morning and receiving his guests in the evening, and saying nothing of his disease. When forced to take to his bed he continued to receive visitors, to whom he spoke in the tone of one suffering from slight indisposition. When racked with pain he would say to the professional brethren who attended him, "Let us have a little intellectual gymnastics," and would straightway start a discussion on some medical subject. One of the very last acts of his life was to get Nélaton to obtain a distinction for a provincial *confrère*, for whom he had a regard. A truly heroic death, made beautiful by a self-sacrificing and enduring courage under prolonged mental and bodily anguish, beside which the mere pluck of the "combatant" shows poor indeed.—*British Medical Journal.*

THE THERAPEUTIC ACTION OF SALOPHEN.—Dr. Edmond Koch, in an inaugural dissertation presented to the university of Freiburg, reports a large number of cases treated with salophen and gives the following summary of his observations: If we compare the above results, we find that salophen proved most efficient in acute articular rheumatism where it rapidly and promptly removed the pains, fever and swelling within a short time. We have met with no case where it failed to act. In efficacy, it is almost equal to salicylic acid, over which it has the advantages of not possessing a disagreeable taste and not being attended by the disturbances so frequently observed during administration of salicylic acid, which so often neutralize the good effects of the remedy. Doses of three to five grammes of salophen *pro die* are amply sufficient in the less severe cases. I am also able to confirm the statement of Dr. Gottman, that the more recent the case, the more certain will be the effect. Although in acute articular rheumatism the results from the use of salophen were very favorable they were inconsiderable in chronic rheumatism and arthritis deformans. Occasionally it effected some relief of the pains, but permanent improvement was never observed. As regards the antipyretic effects of the remedy, I am unable to give a decision. In the two cases reported where a high temperature existed, it quite rapidly reduced the fever. At any rate, it may also be tried in cases of fever. Salophen appeared extremely effective in nervous affections of the most diverse character. In these troubles, it acted even in small doses, 0.75–2 grammes, with great rapidity in most cases, removing or at least relieving the pain. In neuralgias it seems an excellent remedy, and may be tried as a substitute for other nervines, such as antipyrine, phenacetine, and acetanilid. In minor nervous affections, such as headache, toothache, etc., it is also indicated. These observations I find confirmed in an article by Dr. Caminer, ("Observations on the Use of Salophen:" *Therap. Monatsh.*, October, 1892), of Elberfeld which came to my notice after conclusion of my experiments. This observer also tried salophen in various nervous troubles, such as habitual headache, trigeminal neuralgia, sciatica, and hemicrania. His conclusion is that salophen is a prompt analgesic in various neuroses and that no toxic effects were noted in any of the cases observed by him. As above stated, I have not investigated the antiseptic and disinfectant action of salophen. If in brief, I formulate my conclusions, the following may be said: In acute, articular rheumatism, salophen has a specific effect almost as marked as that of salicylic acid. In chronic articular rheumatism, it is less effective, but may be employed as substitute for other remedies, since it relieves the pains, at least at the beginning of its administration. In the most diverse nervous disorders it exhibits an excellent analgesic effect. Disagreeable after-effects are never seen in doses of three to five grammes which are amply sufficient.

AN interesting communication on the treatment of seasickness is made by Dr. George Macdonald, Glasgow. He states (*British Medical Journal*, 1892, September 17) that it was his custom to prescribe in these cases a mixture of potassium bromide and spirit of chloroform; although this proved useless in many cases, yet it had the objection of being exceedingly liable to rejection by the stomach. The combination of chloralamid and bromide of potassium ("chlorobrom") was however never rejected in his experience, while at the same time it seldom failed to allay gastric disturbance and induce refreshing sleep, from which the patient awoke with a clear head, fair appetite, and free from all disagreeable symptoms. He considered that the perfect safety, agreeable taste and freedom from disturbing after-effects of the remedy all combined to render it an admirable preparation and an ideal sedative. The author described one case in which the seasickness was complicated by gastric ulcer, rendering the danger of perforation of the stomach wall imminent. The patient (a young woman) was markedly anæmic, and the vomited matter had a characteristic "coffee-grounds" appearance; there was continuous retching, headache, sleeplessness and prostration. Half an ounce of the combination was given at once, and in twenty minutes sound sleep followed and lasted for eight hours. Subsequently fluid nourishment at frequent intervals, finally chopped ice and small doses of the remedy were given, and after two days the patient could be moved to the deck without inconveniencing her, and she continued to improve in health until the end of the voyage.

OBSERVATIONS ON THE ETIOLOGY OF ACUTE BRIGHT'S DISEASE.—Dr. Agnes Bluhm has classified the causes of all cases of Bright's disease occurring in the medical clinic at Zurich, during a period of five and one-half years. The infectious diseases are the chief cause of acute Bright's disease occurring as it does after typhoid fever, acute exanthemata, erysipelas, variola, diphtheria, tonsillar angina, croupous pneumonia, acute peritonitis, and acute miliary tuberculosis. Among the chronic infectious diseases, tuberculosis and syphilis are mentioned; a number of skin diseases are also included, as eczema, psoriasis, tuberculosis cutis, and erythema nodosum. Among toxic causes three cases are noted following the use of mercury, lead, and thallin. Among the other causes of acute nephritis are mentioned: intestinal diseases, icterus, circulatory affections, pregnancy, leukæmia, and gonorrhœa. In nine per cent. of the cases no etiology could be determined. The causes of the chronic parenchymatous form of nephritis are more uncertain, but it was due in the larger number of cases to malaria, misuse of alcohol, and unhygenic conditions. Among the causes of genuine contracted kidney, syphilis was present in eleven per cent. and arteriosclerosis in seventeen and seven-tenths per cent. of the cases; misuse of alcohol, and lead were also concerned in the etiology of this form of nephritis. Regarding the development of acute nephritis after acute infectious diseases, it was observed that neither the severity nor the course of the primary affection exerted any special influence on the nephritis.—*Occidental Medical Times.*

TREATMENT OF TYPHOID FEVER.—The pathological factor concerned in the evolution of this disease is now generally admitted by scientists to be a specific germ, the bacillus typhosus, whether of the classification of Recklinghausen, Eberth or Klebs, we feel is of little importance to us as practical physicians at this time. To dislodge or antidote this vitalized organism, giving rise to typhoid fever, requires of each physician promptness and an intelligent use of germicidal remedies of decided and definite therapeutic force and efficiency. In the special case above referred to the disease had existed for a period of six weeks, the temperature curve ranging from 100° to 101° Fahrenheit during the morning hours, to 102° to 103° in the evening, and thus continued persistently regardless of the remedies used. I had given the salicylates, turpentine and milk punch ad libitum, and had daily used a warm water enema to keep the bowels clear of accumulated feces, the true source many times of the contagium of this disease. My patient failed to improve, and as the usual routine of remedies laid down in the books had been exhausted, and had proved valueless in staying the progress of the fever, I concluded as a dernier resort to employ the germicidal remedy, katharmon, and hence put a practical theory on trial to meet the emergencies of this particular case. I therefore substituted this preparation in half drachm doses, because of its well established antiseptic and germicidal properties for all other remedies previously used, and pushed the same vigorously for several days in succession. I at once observed a marked and decided improvement in my patient. The temperature began to decline immediately, and in a few days had reached the normal limit, my patient from this time on making a speedy and rapid recovery. I honestly belief that the remedy exercised a specific influence in antidoting and eliminating the typhic poison, and that if intelligently employed in similar cases will produce like results.—C. H. Jennings, M. D., in *Saint Louis Medical Era.*

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

THE RELATIONS OF THE PHYSICIAN TO MANKIND.*

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Not by reason of any merit of my own, but simply by the law of rotation, I stand here to-night to say a few valedictory words to the class of 1893. I freely confess that there are many among our faculty who could speak these words more acceptably, still there is no one who feels more kindly toward you, no one who more truly hopes for a successful future for each and every member of the class. To-night the pleasant relations of the last few years—the relation of teacher and student—is severed, and you stand enrolled as members of the medical profession; and it is of the work of this profession—a work second to no other in its relation to humanity—of which I wish to speak at this time. You will hear much spoken of the work of the physician. He will be spoken of in kindly words, and as one who stands at the portal of life and gives the child to the anxious mother's arms; the one who, in the darkest hour of affliction, steadfast and firm, quick in thought and trained in action, fights the grim battle of life and death; the one who, when hope is past, stands tenderly by to smooth the downward path which leads into outer darkness. This is the work of the physician in his relation to the individual—noble in its aim and worthy of his best effort, but there is a higher plane of work—the relation of the physician to humanity in the mass. It is in this relation that the highest duty of the profession lies, and it is of this work that I wish to speak in the short time which has been allotted to me.

In former days it was taught that the human body was to be despised; that it was of the earth earthy; a heavy mass of senseless clay whose tendency was to crush out and debase that which was noblest and best in man. It was taught that as this body was weakened and reduced the better part rose in ascendency, and above a wrecked and shattered physical frame the intellectual and spiritual flame burned with brighter, purer light. And so, in dark and gloomy cells, men weakened by starvation and lacerated with bloody scourges, heard voices and saw visions which were but the aberrant actions of starving brains crying for healthy blood.

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* An address delivered before the graduating class of the Detroit College of Medicine.

Men suffering from diseases depressing in their character, diseases which cast a gloom upon all mental action, pondered in solitude and then strove to teach men how to think and speak and live. From such sources came creeds and dogmas which have hung like a pall over the human race and driven men to despair, insanity and death. As a result of the teachings of such as these, cruel wars have desolated the fairest portions of the earth; fires have burned around the martyr's stake; men, women and children have suffered, starved and died; and page after page of history has been written in blood and tears. The Moslem hosts, with sword in one hand and the Koran in the other swept triumphantly over a large portion of the world, scattering the nations before them like chaff before the wind. Their hearts were steeled and their arms were nerved by a religion which had its origin (perhaps) in the visions and illusions of an epileptic.

In every age fanatics have arisen, men of so-called unbalanced mind, but rather of unbalanced brain, and followers in crowds have gathered around their standards and bent their knees. Kings and rulers, mentally unbalanced, have plunged their countries into war, bankruptcy, and ruin. The history of the crusades is interesting as a history of insanity in the mass; and was not our own American revolution the result of the insanity of an English king?

Through the darkness which surrounds the most cruel tragedies in the world's history woman's form is dimly seen, and the fair Helen of Troy, whose fatal beauty wrought ruin and death, is but a type of many others of whom we read between the lines on history's page. Time and again a woman's smile or half averted glance has had more influence upon the world's affairs than the armed legions of war or statesman's subtle craft.

If history teaches us one thing above another it is that the physical factor must be always taken into consideration; and it is the duty of the physician to teach this to his fellow-men; to teach that the perfection of the body will produce the highest mental vigor; that healthful thought must come from healthy brain and healthy brain must be nourished by healthy blood. The perfection of the race lies in the perfection of the physical body and the development of a symmetrical normal brain. In the treatment of the degraded and criminal classes the physician has also a mission to perform. It is taught that the moral nature of such as these is at fault; that if they so willed they could cast aside their low and brutal instincts and, rising to a higher plane, stand on an equality with the best of men; and so influences are brought upon them to rouse this moral nature and bring about a reformation. But the physician approaches the question from the physical side. We know that over many a cradle there hangs like a pall a curse of heredity that shall grow and strengthen with the years. We know that a criminal will beget criminals; that the infant smiling upon a degraded mother's breast is born to a life of sin and shame. We know that the cutting off of the blood supply from a small portion of the brain, or the aberrant action of a few cerebral cells will transform a man into a brute, an angel into an outcast.

The physician approaches these questions with no phariseeism or sentimentalism. We must teach that as the condition is due to peculiar physical conformation, inherited or otherwise, joined with the influence of environment, that the conformation must be corrected if possible, and the environment improved; that criminals must not be permitted to produce criminals, and that a criminal convicted of a capital crime must be painlessly put to death. In the matter of hygiene and the preservation of the public health the physician must be the teacher. The people must be brought to recognize the fact that the marriage of the diseased and weakly must be restricted; that men and women have no right to bring into the world children to either suffer and die prematurely or to drag out a miserable existence and transmit again to their children the fatal inheritance. It is a shameful and pitiful thing to say, but it is nevertheless true, that in this nineteenth century more thought and care is shown in the breeding of animals than in the production of the human race.

In the work of the prevention of disease, the stamping out of contagion, there is a vast field of labor for our profession.

It is impossible to estimate the total number of years added to human life by the thought and work of JENNER. Thousands and tens of thousands of lives have been saved in each year as the result of his life-work. No man could ask a nobler record, and his name is written high upon that immortal scroll that bears the name of the benefactors of the human race. Throughout the world to-day in laboratories and clinic rooms, men, worn with thought and study, are giving the best years of their lives to experiment and research as to the causes of disease. The baneful secrets of the bacteriological world are being disclosed. The light is coming; already we see the dawning of a clearer, brighter day in medicine and surgery. Here, in a field worthy of your noblest effort, the harvest is ripe; it stands waiting.

From a state of utter barbarism, from a condition of wretchedness and brutishness, the cave-dweller of the past has developed into the man of the present. We trace the long and arduous path up which he has toiled, picking up here and there a mental or moral attribute, and here and there casting aside some bruitish instinct. As evolutionists, we know that the same natural laws are in existence to-day; the same forces are in action which have wrought the wonderful development in the past. We know that

> "Through the ages one eternal purpose runs,
> And the thoughts of men are widened by the process of the suns."

And so with perfect faith we look forward to the future, believing that the gulf which separates the prehistoric man from the man of the present will be equalled by that which separates the man of to-day from the perfected man of the future—a perfect physical being with a brain symmetrically developed to the utmost extent. As a natural and necessary outcome of such a condition a new era will dawn upon the world. Then will come that perfect state of society of which our nationalistic friends dream and are striving to bring about by artificial means—that millennial period which our Christian brethren look forward to and pray for; a world in which crime will be obliterated and pauperism blotted out; a world in which the brotherhood of man will no longer be a theory but an accepted fact; a world in which the burden will be lifted from weary shoulders and the pathway smoothed for tired feet. Then will the morning stars sing together with a new and greater joy. A gifted orator looking forward with prophetic eye to this coming period says: "I see a world at peace; where labor reaps its true reward; a world without prisons, without workhouses, without asylums; a world on which the gibbet's shadow never falls. I see a race without disease of flesh or brain, shapely and fair, the married harmony of form and function; and as I look life is lengthened and love is strengthened, joy deepens, fear dies."

To hasten this coming time, to assist in this development of the race is a part of the work of our profession. Men must be taught the laws of health and life; the curse of heredity must be blotted out; the danger of disease must be overcome; so that a child born into the world shall come a perfect child and its tenure of life be made secure. Here is a noble work for each and every one of you; and if, when the brain weakens, and the hands grow weary you can feel that you have done a little to assist in this great work, you will enter into rest with the satisfaction of knowing that you have not lived in vain.

And now, gentlemen of the graduating class, a few valedictory words and I shall have finished. One name is absent from the list to-night, and in this hour of happiness and congratulation, we recall the name of MEREDITH. In the midst of study and work, upon the threshhold of life, death claimed him. If he had lived, it is the testimony of the faculty that he would have stood with you this evening. The flowers which should have decked his diploma we place upon his folded hands; may he rest in peace.

You stand to-night upon the threshhold of your professional life; your future is in your own hands, to make or mar. The foundations of your professional knowledge have been carefully and firmly laid under the supervision of the faculty of your alma mater; the superstructure is in your hands. Carry out with you to-night a high ideal of your life-work, and strive to preserve that ideal to the end. At the present time when the ranks of the profession are crowded, and our ideas of living extravagant, the "struggle for existence" has become so severe that physicians are apt to lose sight of the higher aims of the profession, and to drift into the methods of trade and the ways of quackery. Our profession as a profession is a high and noble one; as a trade, which fattens and grows rich upon the pains and fears of humanity, it is a base, ignoble one.

Remember that "work is the genius that wins;" and prominence in any profession or business is only attained by long, hard and continuous effort.

And now, gentlemen of the class of 1893, it remains only for me, in behalf of the trustees and faculty of the Detroit College of Medicine; in the name of your alma mater, to bid you godspeed.

SOME SURGICAL SUGGESTIONS.*

BY W. J. HERDMAN, M. D., ANN ARBOR, MICHIGAN,
PROFESSOR OF NERVOUS DISEASES IN THE UNIVERSITY OF MICHIGAN.

SOME years ago DR. SPENCER WELLS, of England, suggested the rather novel method of treating sluggish ulcers such as bed sores, by shaping a piece of silver foil the size of the ulcer, applying it to the eroded surface and at a little distance above upon the skin placing a piece of zinc, connecting the two by means of a wire firmly fastened to both and binding them to the surface of the skin by adhesive plaster. The result was eminently satisfactory, and in such instances where the method has been properly applied by others it has proved valuable in reviving healthful restorative action in a wounded surface or abrasion where the chief characteristic is a lack of vital activity. As can be readily seen in the light of present knowlege the physical conditions created by the arrangement are such as to form a galvanic battery, with the zinc plate for the positive element and the silver plate for the negative element, while the fluids saturating the skin and tissues intervening, take the place of the exciting liquid. The wire connecting the two plates completed the circuit and the current in the external or wire part of the circuit travelled from the silver to the zinc and within the tissues from the zinc to the silver.

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Dr. C. K. Mills, of Philadelphia, has carried on some experiments at the Philadelphia hospital in the treatment of chronic and sluggish ulcerations by this method and his results have been such that he pronounces it of great value.

The continuous or galvanic current of electricity can be shown to produce on living animal tissues, positive and precise effects that can be made to serve the surgeon most dutifully and well in a great variety of ways where properly apprehended and skillfully applied. These effects have been named *electrolysis*, *electro-endosmose*, and *catalysis.*

Of the first two processes only, do I wish to speak here, since the changes they bring about are less obscure, and it appears to me that it is through the actions they exhibit that surgery will receive its chief aid from electricity.

You are aware that the passage of a continuous or galvanic current, no matter what its quantity, weak or strong, through a compound solution, causes at the point of contact of the electrodes with such liquid peculiar changes. At the positive pole, or anode, acids and oxygen are liberated, while at the negative pole or cathode the alkalies, hydrogen and metals composing the compound liquid accumulate. Now, since all tissues of a living body are saturated with, and are largely made up of such liquids of complex composition, the same effect in the disruption of their chemical arrangement takes place in a greater or less degree, dependent upon the strength of the current passing. And what is seen to take place at the poles in the separation of elements peculiar to each can be readily demonstrated as taking place at any point within the tissues intervening between the poles, and thus chemical affinities under the constructive influence of vital force are directly counteracted by the introduction of electric energy.

These products of electric decomposition, when they have accumulated at the poles in sufficient quantity may, of themselves, have a direct effect, peculiar to themselves, upon the tissues with which they are in contact.

The acids generated at the positive pole cause coagulation of the albumunoid and fibrous constituents of the fluids and cell contents and thus have a drying or hardening and styptic effect on such tissues, while the alkalies generated at the negative pole cause softening and liquefaction of the tissues in their immediate vicinity.

These changes, thus brought about both at the poles and within the intervening tissues as the immediate result of the passage of a continuous current, is what is meant by *electrolysis*, and its range of application to surgical requirements is very extensive when either coagulative or liquefactive changes upon tissues would prove of service. But the passing of such an electric current does more than this. While it is in transit from one part of the body to another it has the power to move liquids in the direction of its flow, that is, from the higher to the lower potential or in other words, from the positive to the negative electrode, either in opposition to the physical phenomena which we term osmosis or as a hastener of that process according as the current of electricity is traveling in the same direction as the fluid subject to osmosis or the reverse. This transmission of an element through tissues as a consequence of the flow of galvanic current is termed *electric-endosmose*, and when utilized for conveying medicated solutions into the body for therapeutic purposes the process has been termed *cataphoresis*.

Now let us refer these known physical and physiological phenomena, which occur as the result of a passage of the continuous electric current through the tissues of the body, to the case of the sluggish ulcer first mentioned, such as a bed-sore. At the point of ulceration granulations do not form; if formed they are of feeble vitality and either suffer necrosis and pass away as pus, or show feeble attempts at organization into the higher form of connective tissue and epithelial cells. Locally this may be due to a lack of proper supply of nutriment or to feeble power of assimulation and construction in cell metabolism. The vital force within the cell may not have power sufficient to wrest the chemical elements from their natural chemical affinities of lower grade and build them up into the higher combinations of cell structure. In both these processes the cell action may be aided by the continuous current, gentle though it be—a fraction of a milliamphere being sufficient to show marked changes in the healing power within a few days. The electrolytic action on the pabulum furnished the cells disrupts the ordinary chemical affinities and leaves the elements to the action of the vital force, while the electric endosmose brings nutrient fluids to the vicinity in greater abundance to be used for constructive purposes. These known facts concerning the physical action of a galvanic current may thus easily explain the *modus operandi* of its curative influence in sluggish ulceration. The clinical evidence that it does have such an influence is beyond question and can be cited in sufficient abundance and on such authority as to convince the most incredulous. The question naturally arises, Could it not be more frequently employed and given a wider range of application to the requirements of surgical treatment. In many instances where reparative energy is feeble in a part, and not dependent upon constitutional but due to local causes, the known properties of the continuous current with its peculiarities of polar action might often serve a better purpose than any medicinal agents that could be brought to bear upon it. A continuous, gentle nutrient, and stimulant action can be gotten from metal foil dressings properly arranged to generate such a current and diffuse it over any extent of surface desired, and these could be made applicable to any part of the body.

Not unlike other therapeutic agents, the strength and quantity of the current employed determines the nature of its effects upon living animal tissues. While a gentle current of one or a fraction of a milliampere may be healthfully stimulating an unusually prolonged application of even a very weak current, or the passage of a stronger current, may prove destructive to tissue organization. Certain tissues of the connective tissue group more readily yield to the destructive action of concentrated currents than do others. Especially connective tissues in a low state of vitality, due to defective organization, give way before the electrolytic action of the continuous current in the presence of vital forces, aided by the absorbent and reconstructive action which these latter bring to bear upon the results of such decomposition.

It is impossible to explain in just what manner the passage of a somewhat concentrated current, or a current of marked density, brings about in the dissolution of cicatricial tissue. But that this is a fact can be proved by any surgeon to his entire satisfaction if he will but take the pains to make the experiment according to the required conditions.

The observance of polarity in securing this effect is an absolute essential. It is the negative electrode only with its capacity for generating the alkalies and hydrogen about it, and toward which the electric-endosmose causes a rapid and free determination of the fluids in the surrounding tissues, that is capable of softening and promoting absorption of cicatricial tissue. When this action of the galvanic current is employed and properly applied to connective tissue of low and imperfect organization, which by reason of its presence is obstructing some channel of the body as the nasal duct, the œsophagus, the rectum, the urethra or the uterine canal; or by its constricting bands is impeding the action of a muscle or tying up the movement of a joint; the offending tissue can, in the great majority of instances and without local or constitutional commotion be made to release its grip, surely and permanently.

That such an action since it is molecular; uniform in all directions; destroys no normal tissue; creates no danger from septic infection; does no injury to surrounding parts; does not confine the patient to bed for an hour; and causes no pain, is altogether superior in many instances to methods long practiced by the opthalmologist, the general surgeon and the gynecologist, for the relief of these various forms of stricture is to the experienced physician or surgeon self evident. That the galvanic current will, in skillful hands, do this and far more; that it will aid the surgeon in many ways in the successful discharge of his multifarious duties, I am prepared with abundant evidence of my own to maintain, and to this may be added testimony unimpeachable of not a few practitioners of high standing and ability, both in this country and in Europe, whose work will bear the closest scrutiny and whose results court inspection. My further suggestion therefore is that those of you who practice surgery avail yourselves of both the constructive and the destructive action of this potent energy and make it your handmaiden to do your will, for it tenders you the most acceptable and efficient service in the solution of many of your most perplexing problems.

THE SCIENTIFIC ASPECTS OF HYSTERIA.*

By J. SAMPSON, M. D., Windsor, Ontario.

One of the calamities of the profession is the fact that the most prevalent of all diseases is the one for which the science of medicine has been able to do the least. No other disease has presented itself so glaringly to the investigator, nor have the baneful and disastrous influences of any other affliction been more strongly impressed on his attention than in hysteria. In no other condition have so many experiments been made and so many remedies applied with only the retrospective knowledge to-day that neither have been of much avail. In its quietly progressive career it has increased its power for evil and stamped its multiplying influence on posterity with as unrelenting certainty as any malady known. In its individual forms it has always invited exploration and in its mode of wrestling with its victim has always courted a therapeutic conflict, and all this with the result that the most advanced authors are still wrangling as to whether hysteria should be described as a disease or a diseased condition. This last term should surely always be looked on as a standing rebuke to science so long as it can be found in any text-book posing as a definition of any human disorder.

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*Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

In presenting to your society a brief paper on the subject I beg to disclaim at the outset the least suspicion on my part of having anything original or of much importance to offer you aside from giving you one more reminder of the mysterious methods of this disease, and of the necessity of its recognition in that stage of its history when something can be done to abate the mental and physical ravages towards which it always tends, and to avoid by its early recognition those sins of professional commission, which in the early outset of the hysterical tide may be vastly graver than those of omission. And I desire to admit most frankly that the difficulty of saying just what hysteria is is one which I have no desire to pretend to finally settle. That there is a very intimate relation between hysteria, hypochondriasis, melancholia, hysteroepilepsy, chorea, some forms of mental aberration, and, perhaps, all the neurasthenic manifestations, there seems to me no doubt, and yet the examination of the blood and the history of the secretive and assimilative functions, and even the records of the pathologist's post-mortem, reveal a condition in many of them that cannot be found in the most aggravated forms of uncomplicated hysteria.

The pathologist's opportunity for investigation in pure hysteria is of course very rare, but he has, so far as I know, made no positive progress in fixing the fact that the disease is a lesion, and it seems unlikely that the microscopist and the chemist of the future can do much more in this direction than has already been done. If there exist no real lesion in the widest sense of the term, then, after all, is it just to designate the hysterical condition as a disease? And yet it is true that the most carefully diagnosed cases of hysteria do occasionally lead straight on to a fatal termination, showing that the original condition was either one of disease or one capable of producing a diseased condition as mysterious as itself. An eminent authority has rendered the estimate that over thirty per cent. of the human race is susceptible to hysteria, and if it is not a disease this statement must imply that one-third of our people are hysterical to the extent of being always liable to hysteric explosions of some degree. To admit this would demand the inclusion of every case of mental ecstasy and would open up the question whether all men and all women might not under extraordinary circumstances display some such hysterical manifestations as to demonstrate the susceptibility of the entire race, and thus decide the question of disease or no disease. Two things we do know, one, that no germ has to account for the condition, and, the other, that hysteria is contagious beyond all other troubles in a sense in which the term contagious can fairly be used. I take it that the normal condition of the race is one of a complete equipoise of the entire nervous system; that this state of equilibrium is always one of exceeding sensitiveness; that this degree of sensitiveness depends more on hereditary perfection than on any other quality; that the loss of this balance results in some phenomenon that is not necessarily in itself a disease, and that hysteria, hypnotism, somnambulism, catalepsy and mental ecstasy are all degrees or varieties of the same condition and all inseparably allied. From this catalogue I would exclude neurasthenia and would name it as a disease intimately connected with them all in its origin and history but classifying it as the first step beyond the line where a disorder becomes a disease and would anticipate for it some time or other a pathological demonstration. I would deny that a greater percentage of women than men, all other factors considered, are subject to hysterical manifestations. The peculiar elements of the female mind, the more sensitive character of her entire constitution, and the attachment to her existence of the most delicate apparatus in the entire animal economy,—all these together with her special surroundings, her functions in the home and her condition of dependence, continually hold the equilibrium of her nervous system at almost the disturbing point; but that her husband might under a stronger excitement almost as certainly and as suddenly lose his own balance and perform some erratic act I am strongly inclined to suspect. The soldiers who followed Joan of Arc with such fanatical enthusiasm were surely well nigh as hysterical as the half demented girl who led them. The ghastly story of the boy crusaders and the tale of Peter the hermit and all the crusades and the almost countless armies that marched shouting to hopeless destruction are surely only wholesale records of ecstatic hysteria. Within an hour a howling mob may in this or any other city in the world be lynching a fellow-man and in the mob may be reputable men who have never until now lost their mental decorum for a single minute. The Malay who runs amuck is surely a hysteric and every man in his country is watched and has to be slaughtered when the outburst comes. The dancing dervishes have all been hysterical for ages and every Indian war-dance ends in a hysterical collapse. The scenes at the old-time camp meetings and the exhibitions given at every negro revival surely all belong to the same category and the cataleptic, the ecstatic and the wildly hysterical may all be seen in the same group. I have seen a famous evangelist with one terrible sentence and a single gesture unbalance hundreds in an intelligent audience. All these manifestations in men, I am persuaded, must be classified under the head of hysteria or temporary insanity, and this last they certainly are not. But in woman, with her more intense sensitiveness and her more intricate complexity of nervous organization, the slightest irritation becomes a disease and she lives continually at well-nigh the explosive point. A disappointment, a fright, a dream, a constitutional depression, the slightest irritation of her maternal apparatus, her equilibrium is lost and the engine of her nervous system is running without a balance-wheel. Many a woman has never manifested her susceptibility to the hysterical condition, but I have never felt certain that there were not thirty years in the life of almost every woman, perhaps every woman, when some circumstance could, if it came to her, develop the condition of which I speak. The Amazons of old selected for their robustness fought with a savage ferocity that was neither womanly nor human but hysterical. The nervous epidemic that passed through France like a great hysterical storm threatened for a time to allow none of a certain class to escape, and I can myself recall, in one of our large hospitals, a single case of hysterical opisthotonos in the female wards increasing to nearly a dozen before morning. Every practitioner of much experience has seen a single case of hysteria multiply itself into a group when he was scarcely expecting it. I have been called within four hours by a respectable and apparently healthy woman who had assisted me in using a catheter on a very sick patient to perform the same delicate operation on herself.

It must never be forgotten that the eternal tendency of hysteria is to permanently fix itself on its victim. Every outburst reduces by its irritating influence the natural normal energy of the nervous system; every reduction of this energy helps to precipitate a new attack; every new attack repeats the process and a pernicious condition is finally established in which the malady is master of the field and the patient in a condition in which she can only feebly resist a long catalogue of calamities all liable to overtake her.

So much for this feature of my subject, and now what of the progressive history of the malady. The horse that has once run away is always on the point of starting and a few repetitions make him useless. The engine that has once run away can only be trusted when repaired to the point of being like it was when it was new. And so with the hysterical woman; she was below her normal healthy condition of nervous equilibrium when the excitant came, or it came in some strongly overwhelming form. To save her from all the disasters that are ahead of her now neither of these conditions must be allowed to continue or repeat itself. It is at this point the physician is called, and it is now that he sometimes commences systematically to complete the shipwreck of his patient. She has pain, or thinks she has, and the irritated nerves must be soothed into silence with anodynes for which they will continue calling for years. She has spasms and is feasted on antispasmodics at the expense of her future happiness, or she has a uterus and it must be talked to and talked about and tormented until it becomes a fiery focus ready at any moment to be the explosive point of a fresh outburst.

I shall say but little of the treatment of hysteria except to express a firm conviction that now, as in the days of old, efforts are sometimes too faithfully made to locate the malady in an organ and not in the constitution, and that sometimes even the attempt to do this is ruinous. SIR BENJAMIN BRODIE, I believe, was the author of the postulate that the mind continually directed to any organ would eventually disturb its function. Of the truth of this there are many instances, and is it not true that the physician had better by his conduct help his patient forget an irritable ovary, a tender spine, or a palpitating heart, than to begin by his treatment to make them prominent points on which she may center her disordered imagination? He who recognizes in the first onslaught of hysteria that he has a real evidence of an abnormal constitutional condition and proceeds wisely and rapidly to restore the system to a point once again above par, and watches to keep it there, is a benefactor to his race. The shiftless hypochondriac with an excess of uric acid may be well in a fortnight, and some advice to guide his mode of living may prevent him ever again contemplating suicide. The man with oxalates in his urine may be himself in a month, and his aphonia, or chorea, or want of vision may never return. The woman whose blood fails to feed the vital centres that must be fed can always find help. The child who is wrestling with the mysterious functions of her youth can be as surely helped as can the butterfly trying to escape from the shell of its chrysalis. The tender girl whose education or surroundings or employment is poisoning or enfeebling her may be rescued and not have to drift on into the hopelessness or helplessness of neurasthenia. The WEIR-MITCHELL system is a most valuable suggestion in the direction of which I write but is after all but a wholesale attempt to undo all this mischief as rapidly as possible, and it will only succeed when it can. It is an effort to recoup nature at once for the outrages of the past and will fail when the wrecker has been too long at work. MITCHELLISM is a great lesson on an important subject, but the moral taught by it will do more for the world than ever its practice will.

Let me ask once more if there are any men or women who are absolutely certain to never display the hysterical tendency? There may be but I feel strongly convinced that if there are any their exemption can be traced to heredity and education and not to accident. That the neurotic peculiarities are especially prone to transmission is absolutely certain, and even in the most innocent form can be found following a family for generations, but it is also equally true that nature is conservative in itself and wants that the fittest should survive and prevail. The children of well-balanced healthy parents with an ancestral history of bodily and mental vigor will give no manifestations of ordinary hysteria if their education and surroundings do not conspire against the moral, mental and physical conditions which were theirs by birthright. By this statement I mean that you will rarely, perhaps never, see a patient of this class in which you may not locate the cause of the condition, and if I knew that there were a hundred men or women in the world absolutely proof against every invasion of hysteria then I would believe it possible that cultivation (by which I mean generation) and education might drive the calamity out of existence. I would expect to learn some day that the antient Greeks for three or four hundred years were less hysterical than any other people of the olden days, and I would suspect that the Japanese of to-day are less liable than our own people, and that the modern Jew was less susceptible than his neighbors; that the Spaniard of the medieval ages was more affected than the Moor occupying the same country, and I would prophesy that this continent in another half century would furnish a less percentage than to-day. Civilization and education and the family physician could, if their forces were wisely joined, drive hysteria out of the world faster than vaccination did small-pox. TODD's *facies hysterica* is a real misnomer, as the term is often used, and is but the stamp of nature on the face of the child of an ill-assorted ancestry and tells of a future almost certain to be realized.

And what of the hysteria that within a day or a week leaves its victim in the grave? I shall dismiss this question briefly. It is the old story that will repeat itself to the ruin and dismay of many an honest physician until some ardent student finds this infallible symptom. It is an error in diagnosis and nothing more; an old mistake easily made and not soon forgotten. I have been a party to an error of this kind and most practitioners of my age could make the same confession. If hysteria can instinctively, as it were, mimic the peculiarities of every known disease, why may not organic diseases of the same centres, in their progress, develop in their turn the symptoms of hysteria, and not only this but in a patient presenting for the first and last time these symptoms?

Lastly, what of the hysterical power to simulate many conditions of true disease? I may say now that it was the original plan of this paper to simply give the details of a few remarkable instances of this peculiarity, but unfortunately, perhaps, it has drifted into other directions. However, I do believe that there are few morbid manifestations that cannot be well nigh duplicated by the hysterical diathesis, and to remember this and to know that an outside febrile condition may accidently accompany is to add to the caution in making many a diagnosis. I have in a former sentence used the term instinctive simulations to emphasize my observations that the duplication may involve symptoms of which the patient may have no knowledge. In a hysterical joint even the physician has been deceived, in hysterical chill the typical goose-skin is common, and in hysterical croup the dangers seem sometimes real. In an attack of hysterical cerebro-spinal meningitis during an epidemic I have found the case apparently very complete in a patient who had never seen a real case. I have seen a case of hysterical hydrophobia very perfect in a young girl who could not know the symptoms of the disease, and I have witnessed a fine display of fœtal movements in a case of hysterical pregnancy. In spite of my remonstrances I was called a month later to attend a woman in a hysterical labor that seemed real enough to deceive the very elect. Lastly, I have seen hysteric catalepsy simulate death itself in a feeble amaciated victim of the last stages of typhoid fever.

SURGICAL CASES ILLUSTRATING SOME FACTS OF CLINICAL INTEREST.*

By CHARLES B. NANCREDE, M. D., Ann Arbor, Michigan.
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May I beg your indulgence in listening to the brief notes of a few selected cases? Each of these has taught me at least one lesson, and I believe that what I have learned will not prove devoid of interest to you. I shall divest the histories of all unnecessary verbiage and facts, because I am not striving to give illustrative points for diagnosis, to determine the etiology, or demonstrate the course of the diseases for which the operations were performed.

Case I.—Nephrotomy Followed by Nephrectomy; Pyæmic Symptoms Due to the Nature of the Ligature Material.—A. S., aged twenty-three years, first entered the University hospital February 17, 1892, complaining that for eight weeks pain radiating from the region of the right kidney had been experienced, and that there was a constant but varying amount of pus in his urine. No signs of cystitis existed, but evidences of failing health were present dating further back than his lumbar pains. I will not dwell upon my reasons for arriving at the diagnosis of pyo-nephrosis, but will say that on February 29, 1892, I did a nephrotomy, evacuating many large cavities in the kidney-substance which contained abominably offensive pus. He greatly improved in health and flesh, the pus diminished, but continued to be present in the urine, and when he was discharged May 19, 1892, a sinus was left, secreting a moderate amount of pus. On October 17, 1892, nephrotomy was done on account of recrudescence of some of the symptoms, especially the amount of pus voided with the urine. Omitting nearly all details of the operation, I will say that the hæmorrhage was very severe from the torn adhesions and that in consequence I was compelled by the necessity for haste to leave one of my provisional ligatures on the stump, as I feared, in removing it, I might cut one of my permanent ligatures which had become entangled with it. Extensive tamponnade with iodoform gauze was necessary to stop the universal ooze from the enormous cavity left. It was simply impossible to avoid rupturing many of the pus cavities; indeed, I could never have removed the kidney at all on account of its great size, except by an expedient I have twice before resorted to, namely, the application of a temporary rubber ligature enabling me to cut the organ away piece-meal, until its bulk was sufficiently reduced to admit of its delivery through the wound. Dispite all my efforts then, the wound cavity was flooded with pus, which, notwithstanding free irrigation infected my silk ligatures. Complete suppression of urine supervened for a time, apparently relieved by nitroglycerine, and the case progresed favorably for about ten days when the urine had to be drawn off with a catheter. Soon violent pyæmic symptoms appeared, that is, severe chills followed by high fever, profuse sweating, subnormal, then normal, temperature for many hours, or a day or two, only to have similar paroxysms occur again and again. The discharge from the wound—which had promptly healed nearly throughout its entire extent —now became intensely offensive, despite a trial of every possible expedient. I detected a deep-seated perineal abscess during the second week of the chills, and evacuated a large amount of offensive pus, relieving the difficulty of micturition and all repetition of the rigors. Prolonged, offensive and quite exhausting suppuration still continued from the operation-wound with a hectic condition which I was convinced resulted from the infected silk ligatures. The repeated efforts of my assistant and of myself, by expedients of no especial interest to the society, enabled us to remove one after the other the offending materials, which were horribly offensive. At present only a small sinus remains, discharging a little fluid; he has gained forty pounds and can work at his trade. What lesson did I learn from this? Never to employ a ligature which can absorb septic material when operating for a suppurating kidney. Silk ligatures are unquestionably the best when dealing with neoplasms of the kidney, but not when pus is present. In conclusion, let me call your attention to the repeated pyæmic paroxysms occurring at irregular intervals resulting from one secondary depot, not from numerous collections; this possibility is well known to many of my hearers, but not to the less experienced, and the emphasis of this point may be of use to some.

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Case II.—LARGE TUMOR OF RAPID GROWTH SPRINGING FROM THE INTERNAL CUTANEOUS NERVE.—Ida W., aged eighteen years, was admitted to the University hospital February 6, 1893, with a negative family history, so far as carcinoma or tubercle was concerned. Her general health had been and was excellent. The present trouble commenced about eight months previous to her admission, within two or three days of having her right arm bruised at the site of the tumor by a falling window-sash. The growth had steadily increased, more rapidly recently, until within two weeks its increased bulk had caused such lameness of the arm that she could hardly use it. Suspecting that the tumor lay beneath some of the large nerves, or had developed in connection with one of them, I carefully examined the large mass which occupied the middle two-fourths of the inner surface of the arm, but could detect nothing positive. A most careful dissection was therefore undertaken which showed that a bold cut down to the tumor would have divided the median nerve which lay for inches between the mass and the skin. The growth was readily isolated, except above and below, when it was seen that the tumor embraced one of the nerves; by careful partial splitting of the growth the nerve—the internal cutaneous—was finally dissected out and the tumor removed. A prompt and uneventful recovery ensued. What lessons can be learned from this case? One which I have had impressed upon me time and again, namely, that although a rapidly growing tumor in a young person following an injury is *usually* sarcomatous, yet it may be innocent, as in this instance PROFESSOR GIBBES utterly failed after repeated examinations, to discover anything but fibro-fatty tissue. A second lesson suggested by this case, which all classes of surgeons might profitably study—the experienced as well as the inexperienced—is, that it is always safest to consider those cases which seem the least complicated, at first sight, to be exactly the reverse—*until the contrary is proved;* and that while a free, bold cut down to a tumor *looks* well, it may often do irretrievable harm, as it would have done in my case, by dividing such an important structure as the median nerve. I could, it is true, have sutured the cut nerve, but perfect functional results do not always follow this procedure. The most brilliant surgery is not that most rapidly accomplished, but where the end is achieved with the minimum damage to uninvolved structures, never mind whether the operation be a long or a short one.

Case III.—MELANOTIC SARCOMA OF THE SKIN OVER THE DORSUM OF THE ROOT OF THE FOURTH TOE, OF THIRTEEN YEARS DURATION.—F. W., aged twenty-two years, entered the University hospital February 26, 1893, with a clear family history. When nine years of age he noticed a small bluish spot over the root of the fourth toe of the left foot. It slowly increased in extent until about eight months before admission, being then about the size of a silver ten cent piece, when a blacksmith cut freely into it giving vent to nothing but blood; since that time the tumor has steadily grown, until when operated upon, it measured one and a quarter inches in most of its diameters. It was painless, at times a small amount of serous discharge exuding from one point. Excision showed it to be absolutely free from all the deeper parts, completely encapsulated, so that it shelled off the tendon-sheath, but the neoplasm clearly originated in, and involved the whole thickness of, the skin. Was there any lesson to learn here? Certainly. The exact reverse of the one taught by the previous case, namely, that while a malignant tumor, especially a sarcoma, usually grows quite fast in the young, such neoplasms *may* exist for many years and yet be small; and that any cutting into or in any way injuring such growths short of extirpating them, is only inviting disaster. Perhaps I may not have needed either of the lessons taught in this case, but possibly some of my hearers my profit.

Case IV.—EXTERNAL URETHROTOMY WITHOUT A GUIDE; RETROGRADE CATHETERIZATION; INCISION OF ANTERIOR STRICTURE, ENABLING THE PATIENT TO PASS URINE BY THE MEATUS.—Stripped of all unnecessary detail, the patient, a man of thirty eight years of age, came to the hospital from one of the chief cities of Ohio, having suffered many things of many surgeons, on account of a stricture of the urethra of fifteen years duration. Dilatation had been twice imperfectly employed, external urethrotomy was then done, recontraction ensued, electrolysis was tried, and so effectively, that about one-half inch of the urethra was totally destroyed. Various operations followed, including, as I understood him, another attempted external urethrotomy, these being done for the relief of the numerous fitulæ which resulted from the exceedingly radical removal (?) of the stricture by electrolysis. The case was a most unpromising one, but he begged for at least a serviceable perineal opening, and I promised this, holding out a slight hope to him and to the class, that, by retrograde catheterization, I might effect something more. Cutting down upon the urethra behind the deepest stricture—which I divided so as to enable me readily to enter the bladder—I introduced an instrument from behind forwards along the urethra until I had reached the posterior portion of the scar-tissue representing the destroyed segment of urethra; this was at the peno-scrotal juncture. A second bougie was now passed into the meatus and division of the scar-tissue between the tips of the two instruments enabled me to pass a catheter directly into the bladder. The india-rubber-like consistence of the whole perineum interdicted any idea of resection of the urethral scar, but this condition is rapidly improving, so that now a large instrument can be readily passed through the urethra. While some of the urine passes through the fistulæ, the amount is steadily diminishing, so that if the tissues go on improving I propose to resect the whole scar representing the destroyed portion of urethra and to reunite the canal. By maintaining the patency of the anterior portion of the canal, in time I expect to close the two remaining fistulæ, only one of which unquestionably gives vent to any urine. Retrograde catheterization, as the procedure I have described is termed, is of course not original, but the rarity with which it is resorted to make this case worthy of record.

The lesson I believe this ought to teach is, that there is no condition of strictured urethra which cannot be overcome by patience and the exercise of a little ingenuity. Again, retrograde catheterization would often enable us in cases of very narrow stricture situated in the pendulous urethra where there were also deep strictures, to pass a filiform guide from behind forwards out through the meatus; threading on this a tunnelled sound, the stricture could be so enlarged that an internal urethrotomy could be at once done, thus at one sitting, with the utmost accuracy the patency of the whole of the narrowed portions of the canal could be restored, the deep strictures being divided from without, the more superficial from within.

Case V.—REPETITION OF LATERAL-LITHOTOMY DEMANDED IN FIVE WEEKS IN A CHILD OF FOUR YEARS OF AGE; ENCYSTED CALCULI (?) OR PROSTATIC CALCULI COMPLICATING A VESICAL CALCULUS.—F. H., aged four, never strong, began when two years old to experience vesical trouble, such as frequent micturition. This passed away in a measure after a few weeks, but one year later frequent micturition returned, pain was present during the act, interruption of the flow of urine was now noted, with the constant presence of pus in the fluid, but never blood. Last fall, after a surgeon had failed to detect any stone when the child was anæsthetized, internal treatment addressed to the cystitis afforded absolute relief from September until late in January. Neither increased frequency of, nor pain during the act of, micturition was noticed during all this time, while the urine presented a normal appearence. Towards the end of January, an ordinary cold appeared to renew all his vesical symptoms. Upon sounding him under anæsthesia at the hospital, I at once detected a stone which seemed strangely fixed near the neck of the bladder. On February 27, 1893, I operated by the lateral method, removing this stone. Feeling some calculous matter caught in the vesical neck, with considerable difficulty I brought away this hook-like mass which had evidently been attached to the calculus, as you can see. Another small fragment corresponding to this other broken spot was lost, while the mother had assured me that a similar one had been passed after my sounding. This, with a most rigid search with my finger led me to believe that a vesicle stone with a prolongation into the urethra or ureter would account for what I had felt when sounding, and had detected during the operation. The boy did well for a few days, when he began to have straining spells when urinating, even while most of the urine passed off by the wound. He expelled from time to time calculous fragments per urethram, with a mass from the depths of the wound, besides enough sand-like particles to have made a stone as large as that removed. The wound having been healed for about ten days, on the thirty-fifth day after the primary operation I cut him again, following my old wound-track, and found the bladder absolutely free from any concretion. Next, turning my attention to the vesical neck, I felt a small calcareous spot no larger than a pin's head. After attempting to use the forceps, repeated and prolonged efforts with a VOLKMANN's spoon and a small currette finally dislodged this facetted calculus from the depths of the soft tissues. Now the introduction of my finger revealed this caculus, also, facetted, *in the bladder*, doubtless loosened by my digging out—for this is the only adequate term—stone number one. Examining again and again, I was about to cease further manipulations when my finger nail struck a little gritty spot in the neck of the bladder. A dozen efforts with the currette brought out this third, facetted stone. No further search detecting more calculi the patient was put to bed. Prompt healing of the wound occurred with marked amelioration of his symptoms, but there is still some cystitis present, although no more sand is passed. What is the explanation of this peculiar case? Probably prostatic calculi originally formed, giving rise to the primary vesical symptoms with incontinence at two and a half years. Next followed cystitis with the formation of a loose phosphatic stone. Then soldering together of the vesical calculus and the projecting, hook-like prostatic stone, with cessation of most of the symptoms of cystitis took place. Finally, fracturing off of the vesical from the prostatic portion occurred, setting free the stone to again cause recrudescence of the vesical symptoms. This seems to be the only satisfactory explanation, for small gritty particles are said by MERCIER to be found in healthy prostates, and are even detectable in children so young as ten years. These, under certain circumstances serve as nuclei around which are formed true prostatic calculi.

I have reported this case because of the rarity of such occurrences in so young a child, and also because of the short time intervening between the operations. The lesson I have learned, is, in the future to most carefully examine the prostatic region during lithotomy, even in young children, especially if, when sounding, any grating is felt just as the sound enters the bladder; this should be all the more imperative if the symptom is elicited most readily by free rotation of the shaft, a manœuvre which would remove the beak of a sound from the surface of a vesical concretion, unless it were of unusual size—a point easily determined.

Case VI.—AMPUTATION AT THE HIP-JOINT BY WYETH'S BLOODLESS METHOD FOR TUBERCULAR DISEASE, CHIEFLY OF THE SOFT PARTS; SECTION OF FEMUR REVEALING FOCI OF BONE DISEASE AS HIGH AS THE TROCHANTER MAJOR.—T. M., aged thirty-one years, was admitted to the University hospital April 13, 1891, with strumous disease of the left knee-joint, probably initiated by gonorrhœal rheumatism. The joint was tapped, washed out, and once injected with iodoform, the man then passing from under my care. Two months later, another surgeon did a supra-condyloid amputation, using the diseased tissues covering the knee for his flaps. It is hardly requisite to say that the wound never healed soundly, the lower half of the thigh becoming honey-combed with tubercular sinuses which did not, however, lead to diseased bone, as determined by the probe. Incipient phthisis existing, no trouble was taken to determine the presence of diseased bone, the condition of the soft parts and the thickened state of the bone far up the thigh, indicating radical measures. Accordingly on May 1, 1893, I amputated by WYETH's method and the patient has not had a bad symptom since. It is believed that the whole wound, except a portion of the drainage-tube track is now soundly healed. The lesson taught by this case is one I have striven for years to impress upon my classes, both here and in the east, namely, that relapses after operations for tubercular bone-diseases, are often relapses only in name, being in reality the results of the gradual evolution of other foci present but undetected at the first operation. This is possible because long spaces of healthy medulla may exist, with no thickening or apparent disease of the exterior of the bone, while latent tubercle is present at numerous points. This lack of all external evidences of disease was especially marked in the upper portion of the specimen from my case.

A word as to WYETH's bloodless method of amputating. I have done this operation twice—once in private last October—and I think it advisable where skilled assistants are not obtainable, but I am doubtful whether in the end much less blood is lost than by some of the older methods. I have, *ipsis manibus*, amputated six times at the hip. In five cases removing, not a stump, but the whole lower extremity. One was done, using the abdominal tourniquet, by LISTON's method, a most trivial loss of blood ensuing; one was done after GUTHRIE's plan employing, however, the abdominal tourniquet; less blood was lost than I have frequently seen in ordinary high thigh amputation. Another case was operated upon by the LARREY flaps, preceded of course, as its author directed, by ligation of the femoral artery; here also very little blood was lost. Finally, a fourth case was operated upon by FURNEAUX JORDAN's plan, the bleeding being most efficiently controlled by the ESMARCH band employed as MR. JORDAN LLOYD has recommended. My last two operations were, as I have said, done strictly according to WYETH.

There is one serious objection, which has impressed itself upon my mind, against the WYETH operation. This is the length of time it takes, adding, I am sure, materially to the shock. By the LARREY or LISTON method, the limb can readily be removed in from thirty to forty-five seconds, during which time but little blood can be lost, especially with some means for controlling the main vessels; the bleeding points can be nearly all secured by the time the last steps of a WYETH disarticulation are concluded, so that the wound is being, or has been nearly closed, before the tremendous shock, so commonly met with after hip-joint amputations comes on. In other words, by WYETH'S method, the shock of a high thigh amputation is inflicted, many minutes are spent in securing the vessels; then a new operation, namely, exarticulation of the head of the bone is done, accompanied by tolerably smart bleeding for a few moments; again ensues a prolonged search for bleeding points in a deep, funnel-shaped cavity; finally, when the patient is thoroughly shocked, comes the closing of the wound. My experience may be exceptional, but these disadvantages certainly exist. Believing that a record of clinical facts with brief comments on the lessons taught, is of infinitely more value than a presentation of the most abstruse of surgical theories, I submit the histories of these cases, and my conclusions for your consideration.

PNEUMONIA.*

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THE subject I wish to bring before the society is one of great interest and one on which there has been a diversity of opinion for a long time, namely: Is acute pneumonia an inflammation of the lungs? More than two hundred years ago HUXHAM called this disease "pneumonic fever," and AUSTIN FLINT in his "Treatise on Medicine," (sixth edition, 1886) prefers this term to acute lobar pneumonia.

To describe this disease I will use FAGGE'S definition: idiopathic in its origin, acute in its course, lobar in its extent, basal in its usual distribution, and fibrinous in the character of its exudation. This description, which is of course, more or less general, excludes (1) broncho-pneumonia, (2) suppurative or infective pneumonia, and (3) traumatic pneumonia. In considering the view usually accepted, that acute pneumonia is an inflammation of the lungs and that the high temperature, altered pulse respiration ratio, and other symptoms, are induced by the local lesion, we must first consider what that local lesion is. We have, in this disease, an engorgement of the blood capillaries in the lungs directly followed by an exudation from the blood, rich in fibrin-forming elements. This produces a condition in the lungs known as hepatization, and this exudation coming directly from the blood is removed from the organ that receives it, without any injury to that organ. With this consolidation of the lungs we have a high temperature, higher than is found in any other inflammation or in any other disease, except the specific fevers, tuberculosis or pyæmia, as has been pointed out by FAGGE. This disease, in a typical case, sets in suddenly with a well-marked rigor and the pyrexia develops rapidly, but in febrile diseases, while the pulse and respiration become more frequent, the relation between them is not much if at all altered. In acute pneumonia, however, the respiration is increased enormously, and in some cases on record, to such an extent that it equals and even exceeds the heart beats. The pyrexia also may precede by several days the physical signs in the lungs. Turning again to the morbid process in the lungs, what evidence of inflammation do we find there? Acute inflammation as a disease process sets up the same change in whatever part of the body it occurs, modified only by differences in structure. One of the principal features of this change is the stoppage of the circulation through the vessels of the affected part, and this part is, as it were, mapped out by the leucocytes which have passed by diapedesis from the vessels into the surrounding tissues, the important point about the disease process being that all parts affected by it take part in it, and are deteriorated by it, and, if it goes far enough, are ultimately destroyed. The process is however the same in all cases. If we take a section of the tongue of a cow where acute inflammation has been set up by the growth of the Ray fungus and a section of the kidney of a child from a case of scarlatinal nephritis, and put these two under the microscope in such a manner that only the inflammatory change is shown, we could not tell one from the other and we could not tell a true inflammation of the lungs from either of these. But there is no condition produced in the lung in a typical case of acute pneumonia which is not of itself distinctive of that disease or which could be mistaken for either of the cases I have just mentioned. As I have already stated, a prominent feature in the inflammatory process is the occlusion of the blood-vessels in the tissue affected. If we take a lung with extensive consolidation and inject into the blood-vessels a two per cent. solution of Berlin blue, we find that it runs through the vessels in the consolidation with the greatest ease—they are entirely permeable. If we examine sections of a lung from a typical case we find that the morbid process has not altered the lung structure to any extent. We can see the walls of the air vesicles and the blood-vessels in them are not materially changed. In the cavity of the air vesicle we find a plug of exudation containing a network of fibrin, and we see that in many places this plug is not adherent or in contact with the wall of the air vesicle. If we now compare this condition with that already mentioned in acute inflammation, we find that there is not the slightest similarity between them. In the one we have a mass of extravasated leucocytes and desquamated cells which entirely obscure the tissue of the part, in the other we have the original structures plainly visible and in almost their normal condition.

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Let us now turn to those morbid changes in the lungs which were excluded by the definition given of acute pneumonia. They are broncho-pneumonia, suppurative or infective pneumonia, and traumatic pneumonia. Let us take typical cases of these. In broncho or lobular pneumonia we have a condition where inflammation, commencing in the air tubes, passes from the bronchioles into that portion of the lung connected with the affected tube and produces a consolidation of the lung substance. Where an affected lobule is lying by the side of one not affected the inflammatory consolidation is seen to be limited by the septum separating them. The size of the consolidation depends on the number of lobules involved in the inflammatory process.

Suppurative or infective pneumonia is caused by particles carried into the lungs in the blood stream and lodged in some of the small vessels. If these particles contain microörganisms, they at once increase and multiply and set up a local inflammation where they lodge. This goes through the usual stages and results in the formation of an abscess. I have produced this condition in animals by injecting organisms into the circulation.

Traumatic pneumonia is an inflammation set up by any injury to the lung substance in the same manner that it would be in any other part of the body.

If we examine sections of the lungs in these conditions we find that the morbid process in all is the same, modified only by the circumstances of the case. In all the inflammatory process has resulted in the same product. The lung substance is entirely obscured by the mass of leucocytes which have passed out of the blood-vessels. In the cases of abscess formation these have broken down and a collection of pus has resulted. If we now examine a section of lung from any of these conditions which has been injected with Berlin blue, we find that all the vessels in the consolidated portion are occluded; none of the injection matter has passed into it. This shows clearly that the vessels are involved in the inflammatory process. The morbid process is the same in these three conditions, but for purposes of comparison we may leave out the two latter and consider only broncho-pneumonia. We have in acute pneumonia a condition where none of the usual symptoms of inflammation occur. It commences suddenly with a rigor and pyrexia, lasts a few days, and then suddenly leaves, the accompanying consolidations undergoing resolution, sometimes before, sometimes after the crisis, and the lung is left in a healthy condition. Some writers state that there are no sequelæ of pneumonia. This may be so in an otherwise healthy subject, but I have seen a number of cases in which the consolidation in a portion of the lung has not cleared up, but has remained as a foreign body and set up fibrous change, the so-called fibroid phthisis.

If we now examine a case of broncho-pneumonia we find a consolidation produced by inflammatory action, the case having all the symptoms of inflammation, the condition in the lung being also produced by a direct extension of the inflammatory process from the bronchioles into the lung substance, the morbid process involving all the structures and producing a consolidation formed of organized products, and not an exudation from the blood. In this disease we have a common termination in caseation of the consolidated portion, if the inflammatory action has been sufficiently intense to destroy the lung substance, and the result is pulmonary phthisis, this being an inflammatory process from the beginning to the end.

If we now contrast the treatment given in the text-books for these two diseases, we find a very marked difference. Taking OSLER as one of the latest writers on the subject: He states that "acute pneumonia is a self-limited disease and runs its course uninfluenced in any way by medicine. Even under the most unfavorable circumstances it will terminate abruptly and naturally, without a dose of medicine having been administered." On the other hand he says of broncho-pneumonia: "The frequency and seriousness of broncho-pneumonia render it a disease which taxes to the utmost the resources of the practitioners." Taking all these things into consideration, ought we not to consider that broncho-pneumonia is inflmmation of the lungs and not acute pneumonia?

The question may now well be asked, If acute pneumonia is not an inflammation of the lungs, what is it? If we consider a typical uncomplicated case, we find that it is initiated by a well marked rigor. I take it that this rigor is produced by some toxic agent in the blood acting on the vaso-motor center so that a spasmodic contraction of the arterioles is produced, cutting off the blood-supply to the periphery and therefore causing congestion of the brain and spinal cord. This, then, points to a changed condition of the blood, and cases which are on record where carbolic acid, when administered in large quantities has produced a typical pneumonia, would seem to support this view. A case of this kind is recorded by Coats, where a tablespoonful of carbolic acid was given by a nurse instead of the same amount of cough mixture, the result being an acute pneumonia presenting the usual physical signs and symptoms. In this case a deleterious agent introduced into the stomach and from there absorbed into the circulation caused a change in the blood of the same character as that found in a typical case of acute pneumonia.

Is it possible that acute pneumonia is a specific disease, where the solidification in the lungs represents an Endanthem in the place of the Exanthem as seen in such a disease as measles?

AN INVESTIGATION INTO A CASE OF PERFORATING ULCER OF THE FOOT MADE IN THE PATHOLOGICAL LABORATORY OF THE UNIVERSITY OF MICHIGAN.*

By A. B. OLSEN and H. F. RAND,
UNDER THE DIRECTION OF
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While engaged in this investigation we took special pains to look up and read all the accessible literature on this subject. This literature, largely in the form of papers reporting special cases, is comparatively voluminous. With but very few exceptions, however, these reports give us no information whatever concerning the structural changes caused by this disease. Of course, in some cases, such a study could not be made, but if in every case where amputation was performed or death of the patient occurred, a microscopic examination of the diseased tissues had been made, much might have been added to our knowledge of the morbid conditions.

It would be interesting to note some of the conflicting theories and views advanced by different writers on this subject, but as we are only concerned with the facts in the case before us we will leave them for the present. Before going on to our case we will quote from two reports in order to present some of the results of other investigators.

In the "Transactions of the Pathological Society of London," volume XXXVI, 1885, page 86, is an interesting and valuable case reported by Drs. A. J. Pepper and A. Q. Silcock. Amputation was performed at the ankle-joint, the patient dying soon after, however. Microscopic examination was made and some of the sections were beautifully reproduced in the paper. We quote as follows: "The anterior and posterior tibial nerves were in a more advanced stage of sclerosis than the nerve-roots, or even, as we are inclined to think, than the cord itself. In some of the bundles it would be difficult to demonstrate normal fibres, these being almost entirely replaced by connective tissues. In transverse sections myelin droplets (as in the cord) are to be seen, whilst the arteries, like those of the cord, are much thickened."

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Page 1222, volume I, 1883, of the *British Medical Journal* contains a report by F. A. SOUTHAM, F. R. C. S., from which we cite the following passage: "A microscopic examination of the nerves from both feet was made by MR. PRIESTLY, and in each instance he found well-marked evidence of sclerosis."

As far as we were able to discover, the above were the only reports of those that we had access to, which contained information regarding the structural condition of the tissues in this disease.

THE CASE.

The patient was a married man and twenty-eight years of age. He was a Belgian by birth, and had worked as a common laborer. About seven years before he came to the University hospital he had a severe attack of inflammatory rheumatism, from which, however, he seemed to have recovered completely. The ulcer began as a blister near the outer margin of the plantar surface of the left foot, probably caused by a badly fitting shoe. This resulted in a sore, which burrowing, formed an opening on the dorsal surface of the foot, through which portions of necrosed bone were afterwards discharged. The patient treated himself and in one year succeeded in healing both openings. After a time a second blister appeared in the same locality, acting in the same manner as the first, but this could not be healed. A physician was consulted, who removed the fifth toe and fourth metatarsal bone. The wound healed. Within three months, however, a small sore appeared on the top of the fourth toe. Exploration proved that this opened into the old wound. The toe was removed, an opening made on the under surface to provide drainage, which never healed. Two months previous to his arrival at the University hospital an opening formed on the under surface of the foot near the heel.

The family of the patient is healthy and his history shows no evidence of cancer, tuberculosis, or syphilis. He entered the hospital September 20, 1892, under the care of DR. C. B. NANCREDE, professor of surgery. A few days later DR. NANCREDE amputated the leg midway between the ankle and knee with a very satisfactory result.

DISSECTION OF THE LEG.—The ulcer was situated on the under and external surface of the foot near the heel. The opening led into the substance of the os calcis. The hole was almost cylindrical and about an inch in depth. The darkly-colored edges were rough and quite hard. The removal of the skin first occupied our attention. On the plantar surface it was much indurated, and in the vicinity of the sore was thickened by a new growth of fibrous connective tissue. The various tendons, vessels and nerves were then dissected out. In this work great care was taken not to stretch, twist, or in any way bruise the tissues, and by so doing we were able to get them out without injury. The structures were dissected out as far as they could be traced. But as soon as they approached the inflamed area they became blended with and entirely obliterated in the dense fibrous tissue. For example, the external plantar nerve, which before entering the inflamed area appeared normal to the eye, gradually disappeared in the fibrous tissue and even the microscope failed to reveal a trace of it. Wherever possible the vessels and nerves were dissected out together. Lastly the ulcerous tissue was dissected from the bone and a portion of the affected bone placed in a dilute solution of chromic and hydrochloric acids to decalcify.

Microscopic Examination.—Sections were made from different portions of all the structures dissected out and stained with logwood made according to Professor Gibbes' method. This brought out the various structures very distinctly.

Of the plantar nerves and vessels we made five serial sections, the first being as high up as possible, the fourth at the beginning, as near as we could tell, of the ulcerous tissue, and the fifth through the substance of the ulcer. In the arteries we found well-marked chronic endarteritis by which the lumen of the vessels was considerably diminished. The new fibrous tissue in the intima was unusually dense. The nerve trunks showed an increase in the epineurium and perineurium, and the endoneurium was thickened throughout. The nerve fibres showed the axis cylinders much swollen and apparently, in some places, undergoing disintegration.

Sections of the tendons taken from a position near their insertion and for some distance above, showed extensive fatty degeneration in the walls of their small blood-vessels. This appeared to be mostly in the muscle fibres, but the formation of fat in many places was so extensive that it was difficult to make out the tissue involved. This change in the walls of the vessels is a very interesting one and will require further investigation to show what its bearing is on the disease in question.

Sections made through the fibrous tissue into which the plantar nerves had been traced failed to reveal the slightest evidence of nerve tissue. The thickened structure round the ulcer consisted of dense granulation tissue in various steps of development and a new growth of connective tissue was found in some parts of the tendons. Sections were made through the os calcis at the seat of the ulcer but they showed nothing beyond absorption of the bone.

In conclusion, we would sum up the structural changes as follows:

In the arteries, a dense growth of fibrous tissue in the intima by which the calibre of the vessel was reduced and the supply of blood to the parts diminished.

In the nerves, a gradual sclerosis of the trunks and change of the terminal portions into fibrous tissue, by which their function would be entirely obliterated.

In the tendons, a fatty degeneration in the small vessles belonging to them by which their function must be considerably impaired, but the full significance of which we have not made out but hope to do so in a further investigation.

In the ulcer itself and the bone affected we found only evidences of ordinary inflammatory action and absorption. The apparent disintegration of the axis cylinder in the nerve trunks would be a point of great importance, if we could have been sure of the morbid nature of the change. This could only be proved by examination of tissue received in a fresh condition and hardened by appropriate methods. This we unfortunately could not do as the leg had been placed in hardening fluid on removal and had remained there for a lengthened period before we made our investigation. We hope, however, in the near future to have an opportunity of examining another case in the fresh state, when this point will receive most careful attention.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, APRIL 3, 1893.

THE PRESIDENT, FREDERICK W. MANN, M. D., IN THE CHAIR.

READING OF PAPERS.

DR. T. A. MCGRAW read a paper entitled "Upon the Value of Some Surgical Statistics," with especial reference to appendicitis. (See the May number of The Physician and Surgeon.)

DR. H. O. WALKER: When it was first made, the statement that the earth was round was met with a great deal of criticism. So it has been with abdominal surgery. The early operators and their operations were severely criticised, and yet they were good operations and followed by good results. My paper, which I read before this society some weeks ago, was a plea for early operation in abdominal cases requiring surgical interference, and I still believe that many patients who are now dead would still be living had an early operation been performed. DR. BULL in a recent paper reports fifty-one cases of abdominal operations with but a single death. All cases of recurrent appendicitis and all cases in which there are any signs or symptoms of septicæmia should be operated upon at once, thus giving the patient the best chance for permanent recovery. The more my mind dwells upon this subject the more firmly am I convinced of the value of the early operation. In our estimation of the good or bad results of any operation we must have statistics, and if they be carefully prepared there is not the slightest doubt of their great value.

DR. DONALD MACLEAN: I have listened with intense interest to DR. MCGRAW'S paper. It is a masterly presentation of a subject still under advisement. Six years' experience is not enough to determine finally what should be done in these cases. It will require the accumulated experience of many more years before these questions can be definitely settled. It is, therefore, in my opinion, a great piece of presumption for any man to attempt to dictate to the profession what should be done in this class of cases. My own facts and figures I do not consider even as the dust in the balance. An operation for appendicitis, no matter how favorable the surroundings, is a dangerous procedure and may go wrong with any operator, no matter how careful he may be. Furthermore, I can produce a dozen cases within a radius of half a mile from here who have had acute attacks of appendicitis, upon whom no operation was performed, who recovered completely and who continue to be perfectly well. Twenty years ago I operated upon a case of appendicitis. This, as far as I have been able to find out, is the first case of appendicitis ever operated upon. DR. MCGRAW'S paper is a strong presentation of the case. Nature's recuperative powers are often sufficient to straighten out these cases. Think for a moment what the laying down of the rule to operate upon all cases of appendicitis means. Every case must be judged upon its merits and the surroundings, and special features of each and every case must be carefully taken into consideration. It is a shame for anybody to lay down such rules as those advocated by the extremists of the day in the face of only six years' experience.

Dr. J. H. Carstens: How are we going to judge of anything if we have no statistics? What prognosis can we give? We must have some basis for our work. We must have the collated experience of many men—and such records are valuable, and especially valuable if the men reporting them are perfectly reliable and honest. Cæsarean section is based upon statistics. Eighty-five per cent. mortality has been reduced to ten per cent. The result of this reduction, which is made manifest by the statistics, is that a great many more of these operations are being done, and a great many lives being saved. Can Dr. Maclean tell us anything about the cases which have died from neglect of surgical procedure in this half-mile circle that he talks about? Can Dr. Maclean tell us in what cases of appendicitis an operation should or should not be done? In the present state of our knowledge it is impossible to state positively what cases should and should not be operated upon. There are different kinds of appendicitis. There is, first, that form which occurs but once; second, then there is the chronic appendicitis, which is liable to relapse at any time; and third, recurrent appendicitis, in which case the patient makes a perfect recovery between the different attacks. The last two varieties of appendicitis should always be operated upon, especially the second.

Dr. Donald Maclean: What is your practice? Will you operate upon all cases?

Dr. J. H. Carstens: I would not, but I would like to.

Dr. H. O. Walker: There is no doubt that patients die from appendicitis in the proportion indicated by statistics, and it has been definitely shown by these statistics that better results are obtained in those cases subjected to operation than in those not operated upon. We should, therefore, not hesitate to operate upon these cases.

Dr. O. W. Owen: All medical practice is based on statistics, and this is particularly true of surgery, and if the man who compiles the statistics is an honest man, his statistics are valuable.

Dr. T. A. McGraw; Perhaps the title of my paper should have been "Worthlessness of Some Statistics." There is no doubt that statistics compiled by honest men are valuable. I am not in any way opposed to early operation in suitable cases.

Don. M. Campbell, M. D., Secretary.

STATED MEETING, APRIL 17, 1893.

The President, FREDERICK W. MANN, M. D., in the Chair.

READING OF PAPERS.

Dr. J. Sampson read a paper entitled "The Scientific Aspects of Hysteria."

Dr. Inglis: Dr. Sampson has given us a strong presentation of those cases of hysteria which, going from one doctor to another, baffle us all. The hopelessness of some of these cases is not to be disputed, although the Wier–Mitchell treatment sometimes succeeds in rescuing cases which, otherwise, would have made life of no value to the patient and an endless burden to the patient's friends. The success of the Wier–Mitchell treatment proves this: that different as these cases are there is still hope for almost any hysterical sufferer. One element of success in the WIER-MITCHELL treatment is constantly overlooked; I refer to the personal moral control of the physician who is directing the treatment. If the physician puts the plan into action without adding the element of his own enthusiasm and the force of his own dominant will, if he be of a pessimistic or sceptical turn of mind, even the WIER-MITCHELL treatment will fail. I can hardly agree with DR. SAMPSON in his somewhat gloomy views as to the severity and prevalence of hysteria. While recognizing the truth of his picture of extreme cases of hysteria, I cannot but feel that it would be unfortunate if either patients or doctors learned to regard hysteria as having a "quietly progressive career," and as "stamping its influence for evil on posterity with unrelenting certainty." On the contrary I believe that there is a steady tendency toward recovery. The condition of the hysterical patient can be summed up very briefly as one of defective inhibition. The motor and sensory functions of the cerebro-spinal axis are the functions which most easily attract our attention, but it is only of recent years that we have learned to take note of the great importance of the function of inhibition. The motor and sensory functions of the cord and brain are to a large extent intermittent, but the function of inhibition is incessant. If now, in any person, the reserve of nervous energy is used up, the inhibitory function may be the one to suffer first and most, while sensation and motion are still well carried on. It depends now upon which area of the cerebro-spinal system loses its inhibitory control. We may have an outbreak of hysteria, or insanity, or chorea, or some other neurosis. Each is but a different manifestion of defective inhibition. The defect may be of temporary duration and is remedied when the reserve of nervous force is again restored. In the majority of young hysterical subjects the exhaustion of nervous reserve is brought about by changes incident to the bodily and intellectual demands of the beginning of manhood and womanhood. Certainly we cannot put before every hysterical young woman the prospect of a "quietly progressive career" of hysteria; no! she will presently reëstablish a reserve nervous force, will regain her defective inhibition, and, as a busy matron, look back upon her hysteria simply as an episode which has passed. What is true of the hysterical young woman is true of the choreic, the hypochondriac, the neurasthenic; they all tend to pass through a more or less prolonged misery to a state of restored equilibrium. It is indeed true that very many patients of these classes never regain their old-time nervous vigor; they adjust themselves to life on a more limited scale of expenditure. They are like reformed spendthrifts, solvent but economical. Neither can I fully agree with the doctor's estimate of the prevalence of hysteria and allied neuroses. I am quite ready to grant that any human being may, under sufficient provocation, develop either hysteria or some departure from normal nervous control; it would be strange if it were otherwise, but that hysteria is "the most prevalent of all diseases" seems too large an estimate. Thirty per cent. of all people may be susceptible to hysteria, but, certainly, thirty per cent. do not develop it. As to the use of the term "contagious," it is, of course, true that the imitative habits of human beings cause a propagation of hysteria in susceptible witnesses, but such a use of the term "contagion" introduces a double meaning into a single word. As regards the treatment of hysteria, I confess to being more optimistic than DR. SAMPSON. I believe with him that "prevention is better than cure," but that the physician can materially aid nature in restoring the reserve of nervous force I certainly believe. THE WIER–MITCHELL plan is itself definite proof of the possibility of doing this, and stands for the model upon which treatment generally needs to be carried out. The controlling influence upon these patients of a strong will is undoubted, and many a physician knows from personal experience how "virtue has gone out of him" and has gone into his hysterical patient. The point in DR. SAMPSON'S paper which seems to me of greatest importance is his protest against sins of commission on the part of the attending physician. I fully agree with him in recognizing the disastrous effect produced when the physician begins energetic treatment of one or other of the various local phenomena of hysteria. Let the doctor begin to treat diligently the palpitating heart, or fractious stomach, or tender ovary, and no subsequent physician can ever obliterate the patient's exaggerated estimate of these subjective complaints. Fully recognizing the necessity of removing any steadily acting cause of reflex disturbance, I still think with DR. SAMPSON that the main object in view ought always to be the general nervous upbuilding, and that local manifestations should be regarded as they really are, of secondary importance.

DR. J. H. CARSTENS: There are various pathological conditions at the bottom of these cases. There are cases which are due to reflex action, as, for instance, a case with internal stenosis of the uterus with dysmenorrhœa, in which case we dilate the uterus and the patient gets well. There are other cases of this variety due to intestinal worms, a decayed tooth, or any other local pathological condition which is capable of setting up reflex action, and in all of these cases the proper thing to do is to relieve the local condition. Then, again, there are those cases in which an unstable nervous system is inherited, and still others which are hysterical because they imitate other people showing hysterical manifestations.

DR. J. FLINTERMANN: I recently saw a case of bilious colic, each attack of colic being followed by hysterical epilepsy, and I show you here a number of gall-stones which were found in the feces. In another case of a patient who was neurasthenic and whose family history pointed towards a weak nervous system, a tumor of the neck was found and with it aphonia. Upon examining the larynx, DRS. HARTZ and SHURLY found its function normal. This was a case of a rare anatomical anomaly, namely, a cervical rib. It is not an easy matter to always decide in these cases whether you have hysteria or a graver disease.

DR. J. B. NEWMAN: In those cases cited in DR. SAMPSON'S paper in which religion played a part it is not hysteria but neurasthenia. It is difficult to differentiate between hysteria and neurasthenia. Heredity often plays an important part in the causation of these diseases. Hysteria is a disturbance of the gray matter, multipolar nerve cells and psychological centers. There may be some reflex disturbance from some local cause, or there may be some general disturbance. It is difficult to diagnose hysteria from pernicious anæmia or railroad spine. The treatment should be moral and tonic. Strychnine is good, so is WIER–MITCHELL'S treatment, but the latter is very hard to properly carry out.

DR. CARRIER: It is very difficult sometimes to say where hysteria ends and some graver disease begins. Another difficult question to decide is exactly what aberration of the mental act we will apply the name hysteria to. If we count in all the slight disturbances, there are at least fifty per cent. of all subjects who at some time in their life present at least one attack of some form of hysterical manifestation. The moral treatment through strong mental impressions is good.

Dr. J. Sampson: I know of one patient, a woman, who, at the age of thirty-five, had a most alarming attack of hysterical croup. She recovered in fifteen minutes after the nature of the attack was diagnosed and has had no attack since. If we could but perpetuate a certain ideal stamp of manhood we could undoubtedly in time banish hysteria from the face of the earth. The most interesting and important cases of hysteria which we meet are those which fall under the heads of—first, imitators; second, fatal cases. In the latter class, I venture to say that in every instance the patient has died not from hysteria but from some graver disease, a mistake in diagnosis having been made. The influence of one mind over another and the effect of fright upon the functions is remarkable. I would make a wide distinction between neurasthenia and hysteria.

Don. M. Campbell, M. D., Secretary.

EDITORIAL ARTICLES.

THE CURE OF SARCOMA BY ERYSIPELAS INOCULATIONS.

In the May number of the *American Journal of the Medical Sciences* there appears a very interesting article by Dr. W. B. Coley, of New York, detailing the author's experience of the treatment of malignant tumors by inoculations of the streptococcus erysipelatis. It has for some time been empirically determined that erysipelas possessed a modifying or curative influence in sarcoma. Dr. Coley has pushed this knowledge to its legitimate bounds, and boldly treated cases of sarcoma by injecting fluid cultures of the streptococcus erysepelatis.

Having convinced himself of the low degree of mortality attendant upon uncomplicated erysipelas, he decided to treat the first case of inoperable sarcoma that presented itself by inoculation. An opportunity was soon afforded by the case of an Italian who had been twice operated upon by distinguished surgeons. The tumor occupied the region of the neck and involved the right tonsil. Treatment by inoculation at first afforded little relief; the tumors diminished somewhat in size, but subsequently began again to increase. At this time, that is about six months after the initiation of this treatment, a fresh culture of erysipelas was procured. Within forty-eight hours after inoculation a typical attack of erysipelas occurred. No effort was made to check it. On the second day the tumor of the neck began to break down and at the end of two weeks it completely disappeared.

The author's subsequent experience largely confirmed the results achieved in his first case. Out of seventeen cases of sarcoma forty-one per cent. seem to have been completely cured. The success of this line of treatment gives strong inferential support to the doctrine of the parasitic origin of these growths. The erysipelas inoculation apparently acts by antagonism. Whether this antagonism arise from the phagocytocic action of the streptococci themselves, or from the action of the toxines generated is still *sub judice*.

While this method of treatment is not sufficiently advanced to be generally employed it would certainly seem to indicate that the treatment of inoperable neoplasms by repeated inoculations of erysipelas is practicable and not attended with much risk.

THE MICHIGAN STATE MEDICAL SOCIETY.

THE meeting of the Michigan state medical society recently held in Muskegon must be classed among the successful gatherings of the society. While the attendance was not so large as on some previous occasions this was not due to diminished interest on the part of the members, and will only tend to impress upon the society the imprudence of calling the meeting in inaccessible localities. While no fault can be found with the heartiness of the welcome accorded by the profession of Muskegon it cannot but be felt that the best interests of the society will be served by meeting in some town easily reached from all parts of the state.

To the sectional programs the attention is naturally directed when estimating the true vitality of the society. These were well supplied with papers and the contributions offered were of a distinctly higher and more scientific tone than those presented at any former meeting.

The executive sessions for the most part illustrated the inutility of this part of the program. The hard-earned leisure of the profession should not be expended on debilitating discussions of amendments to by-laws and other trivial matters which would be better accomplished by an executive committee.

The proposal to abolish the printing of transactions is one which the society will have to consider carefully. There is much to be urged both for and against this proposal. The society has undoubtedly gained some influence and prestige among the other state societies by issuing every year a handsome volume of transactions. Yet this is an extremely expensive undertaking, and after all the true criterion of a society's usefulness is not to be estimated by what the society shall appear to be to others, as by what it actually is to its members. The best of the papers appearing in the transactions have usually been published elsewhere, and the large sum expended in placing them before the members, invested in a banquet, or in some other plan of cultivating social amenities, would doubtless attract a large attendance to each meeting.

The society this year honored itself by electing as its president DR. EUGENE BOISE, of Grand Rapids, a gentleman who has the esteem and good-will of the entire profession. DR. BOISE has been an energetic member of the society for many years and will in every way prove a capable custodian of its interests.

EDITORIAL BREVITIES.

BACTERIA AND TOBACCO.

THE bacteria are gradually being adapted to the service of mankind. It has recently been discovered that these minute organisms play an important part in determining the quality of tobacco. The leaves of the tobacco plant, before being manufactured into cigars, undergo certain fermentative changes. These fermentative changes were formerly believed to be of a purely chemical nature. In a paper recently read before the German botanical society, SUCHLAND gives an account of his recent investigations on the bacteria found in different kinds of tobacco. He finds that pure cultures of one kind of tobacco inoculated in another kind generate in the latter the taste and aroma of the original tobacco from which the culture was obtained. This discovery suggests great possibilities. Domestic tobacco may now be inoculated with the bacteria of the Havana tobaccos and fermentative changes induced in the raw material and the quality so improved.

THE CONTAGIOUS DISEASES HOSPITAL.

THE bill before the legislature for the creation of a public contagious diseases hospital, while in the main a good one, contains certain objectionable features which will probably prevent its adoption. The power given to the commissioners to bond the city without reference to the board of aldermen or board of estimates is certainly a wrong principle to introduce into municipal legislation. A hospital to cost two hundred thousand dollars will be either too large or too small. Too small if it be expected by its erection to provide against epidemics of small-pox or cholera; too large for the treatment of the known cases of diphtheria or scarlatina. Of these latter there are only about three thousand cases a year. Fully two-thirds of these cases will be cared for properly in private life. A two hundred thousand dollar hospital is therefore not necessary for the treatment of the seventy or eighty cases of these diseases per month. There can be no greater menace to existing institutions than a large hospital building with funds to conduct it and no patients to fill it.

MEDICAL NEWS.

Ohio has over eight thousand physicians.

A MEDICAL velocipede club has been organized in Paris.

PARIS has a society of magnetizers. They prohibit the treatment of disease with drugs.

CHICAGO hotel doctors charge a fee of three dollars each for day calls and five dollars for those made at night.

THE American electro-therapeutic association will hold its next meeting in Chicago, September 12, 13 and 14.

THE fourth annual meeting of the association of American medical colleges, will be held in Milwaukee on June 7.

THE Pennsylvania legislature has a bill before it which prohibits the exhibition of monstrosities in public places.

THE Toronto clinical society has lately been organized in that city under the presidency of Dr. J. Algernon Temple.

THE twenty-third annual meeting of the Colorado state medical society will be held at Denver on June 20, 21 and 22.

HUMMEL & PARMELE, of Philadelphia, medical journal representatives, have moved from 612 Drexel building to 157 South Fourth street, where they have more commodious quarters, necessitated by their increasing business.

The Gross memorial fund has reached the sum of eight thousand dollars. Only two thousand still remain to be collected.

A Sanitary Convention will be held at Hillsdale, Michigan, July 6 and 7, under the auspices of the state board of health.

A case of Asiatic leprosy, the patient being a Syrian woman, was recently discovered at Fort Wayne, Indiana, by physicians.

A Chinese quack, who was reported to have had a practice of forty-five thousand dollars a year, recently died in San Francisco.

Dr. De Bossy, of Havre, is a centenarian and still continues to practice his profession. His father lived to be one hundred and seven.

The medical society of Virginia will hold its twenty-fourth annual meeting in the Levy opera house at Charlottesville on Tuesday, October 3.

The use of salicylic acid or any of its derivatives in beverages or food of any kind has been prohibited by the board of health of the City of Mexico.

Dr. G. W. Stoner, of Baltimore, formerly located at Detroit, has been detailed to represent the United States marine hospital service at the International congress of charities, etc., at Chicago.

Dr. Charles Carroll Lee, of New York City, died May 10. He was president of the medical society of the county of New York, and professor in the post-graduate medical school of that city.

It is proposed to invest the calendar with a "Sanitary Day" which shall be devoted "to the pious contemplation of bacteria and kindred topics calculated to make people cheerful, healthy and wise."

Saint Mary's Hospital Journal.—The medical journals of Michigan have been added to by another hospital bulletin issued by the sisters of charity of Saint Mary's hospital, Detroit. The first number contains the record of several interesting clinical cases.

The memory of D. Hayes Agnew is to be commemorated by a one hundred and fifty thousand dollar memorial in the nature of a hospital ward. This is said to be the largest amount of money which it has ever been attempted to raise in memory of a physician.

The British gynecological society has refused admission to women. In discussing the matter, the *Medical Press and Circular* says "they would retain the ladies as subjects, handmaids and patients, but display marked reluctance to admitting 'them on all fours' within the sacred precints of the societies."

Michigan State Medical Society.—At the meeting held at Muskegon, May 11 and 12, the following were elected officers for the ensuing year: President, Eugene Boise, Grand Rapids; secretary, C. W. Hitchcock, Detroit; treasurer, W. G. Henry, Detroit. Section on surgery—Chairman, J. Burkhart, Big Rapids; secretary, Angus McLean, Detroit; orator, Frederick W. Mann, Detroit. Section on medicine—Chairman, A. E. Carrier, Detroit; secretary, George Dock, Ann Arbor; orator, V. C. Vaughan, Ann Arbor. Section on gynecology—Chairman, J. H. Patterson, Charlotte; secretary, R. Peterson, Grand Rapids.

THE association of American obstetricians and gynecologists met in Detroit June 1. The arrangements included a banquet held at the hotel Cadillac. The general meetings took place in the Russell house.

DR. W. A. S. WILLIAMS, of Petoskey, Michigan, died very suddenly on the 11th of May. He had been confined to the house during the day with neuralgia and at 7:30, with only a few moments of suffering, he breathed his last. He was born in the West Indies in 1835, educated at Toronto and Michigan universities, afterward practicing medicine in Jackson county. Petoskey has been his place of residence since 1880.

MEDICAL INSPECTOR J. RUFUS TRYON, has been promoted to the office of surgeon-general of the navy *vice* J. Mills Browne retired on account of age. The new surgeon is a native of New York, and is at present attached to the flag-ship "Chicago." He entered the medical corps of the navy in 1863, and served in the West Gulf squadron until 1865, when he was ordered to the naval hospital at Boston. From 1870 to 1873 he served with the Asiatic squadron. He has been on duty at Pensacola, New York, Philadelphia, and with the Pacific and European squadrons. He is considered an excellent man for the position.

RECENT PUBLICATIONS.

REVIEWS.

MANUAL OF CHEMISTRY.*

A DEMAND for a fourth edition of Professor Simon's "Manual of Chemistry," is an evidence of the value set upon it by the teaching fraternity. The work is closely adapted to the needs of the medical and pharmaceutical student. The colored plates illustrating reactions will be an advantage to the student and save the teacher considerable time in the verification of student's work in the laboratory. That part of the work dealing with toxicology is very ample. The decimal system has been strictly adhered to in all weights and measures. The volume forms a thoroughly practical and reliable guide to chemical science.

* By W. Simon, Ph. D., M. D., professor of chemistry and toxicology in the college of Physicians and Surgeons; professor of chemistry and analytical chemistry in the Maryland college of pharmacy, Baltimore. Fourth edition. Lea Brothers & Company, Philadelphia.

CHOLERA.*

IN the volume before us Dr. Stockwell makes a valiant defense of the neurotic character of cholera. In a compilation of views of all kinds, those expressing a favorable estimate of the rôle played by the nervous system have been especially commended. To summarize all bacterial pathology as depending "solely upon hypothetical assumptions" is hardly a correct estimate of the method. To describe the pathology as "merely an experimental experience admitting neither negations nor offsets" and the therapeutics based upon this pathology as "a form of still hunt with untried weapons in an unknown jungle after hypothetical prey" is manifestly absurd. The therapeutics of cholera may not be so satisfactory as those of diphtheria, based upon the same "hypothetical assumptions," but they have certainly gained something from the discovery of Koch, while in the matter of prophylaxis everything has been gained.

Dr. Stockwell's book will be found an excellent résumé of the different opinions that have been held from time to time in regard to this interesting malady.

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* Its protean aspects and its management. By G. Archie Stockwell, M. D. Physicians' Leisure Library Series. Two volumes. George S. Davis, Detroit.

PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS.*

The favorable opinion expressed in regard to the work two years ago when it made its first appearance has been amply justified in the reception it has been accorded, and the demand for a second edition will not cause surprise to those familiar with the merits of the work. The work has been rewritten and remodelled and in all departments of therapeutics will be found up to date. One of the chief merits of the work will be found in the diversity and completeness which characterizes its review of remedial agents. Not alone drugs, but every agent capable of modifying or ameliorating disease. The sections dealing with electro-therapeutics, hypnotism, and kindred subjects indicate the modern tone which pervades the volume and show careful revision of the text. The work is admirably printed, and will be found easy reading, which is the best assurance of good writing.

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* By John V. Shoemaker, A. M., M. D., professor of materia medica, pharmacology, therapeutics, and clinical medicine, and clinical professor of diseases of the skin in the Medico-Chirurgical college of Philadelphia; physician to the Medico-Chirurgical hospital; member of the American medical association, of the Pennsylvania and Minnesota state medical societies, the American academy of medicine, the British medical association; fellow of the medical society of London, et cætera, et cætera. Second edition. Revised. In two royal octavo volumes. Volume I, three hundred and fifty-three pages: Devoted to pharmacy, general pharmacology, and therapeutics and remedial agents not properly classed with drugs. Volume II, six hundred and eighty pages: An independent volume upon drugs. Volume I, in cloth, $2.50 net; sheep, $3.25 net. Volume II, in cloth, $3.50 net; sheep, $4.50 net. Philadelphia: The F. A. Davis Company, publishers, 1914 and 1916 Cherry street.

INTERNATIONAL CLINICS.*

The third series of *International Clinics* is now being issued. Each new number seems if anything to be more interesting than its predecessor. The present volume contains a large number of especially interesting lectures. They are all vivid with a clinical spirit, and redolent of the atmosphere of hospital and amphitheatre. Every subscriber to this valuable enterprise will feel gratified at the exceptionally successful result that is being achieved.

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* Edited by J. M. Keating, M. D., LL. D., Judson Daland, M. D., J. Mitchell Bruce, M. D., F. R. C. P., and D. W. Finlay, M. D., F. R. C. P. Volume I. Third series. J. B. Lippincott Company, Philadelphia.

MEDICAL PROGRESS.

MEDICINE.

THE ETIOLOGY OF PLEURISY AS IT BEARS UPON PROGNOSIS AND TREATMENT.

Though pleurisy may be regarded as among the best-understood diseases in so far as its pathology and symptomatology are concerned it has few equals as regards the difficulty of rendering a correct prognosis. Why, of two cases precisely similar to all appearances, should the one quickly go on to recovery after a single tapping, while the other hangs on most persistently and develops into empyema in spite of every care on the part of the physician? Nothing is more unaccountable than the great diversity in the course of the disease under apparently identical circumstances. Furthermore, the greatest difference of opinion obtains as to the treatment best suited to its cure. Any observations, then, which may throw light upon its prognosis, and which may serve to establish its treatment upon a firm rational basis must be welcomed with more than usual interest.

The study of the past few years upon this subject has demonstrated the presence of several different species of pathogenic bacteria in pleuritic exudates, both serous and purulent, and as these observations have accumulated it has been possible to trace a relationship between the severity and duration of the disease and the species of microörganism present. The most recent and one of the most careful of these studies is reported by Prince Ludwig Ferdinand in the *Deutches Archiv für klinische Medicin* (1892, l. 1), and as the conclusions there reached are substantially in accord with those of most observers, it has seemed proper to present them here somewhat in detail.

In the investigation a small amount of the exudate was withdrawn from the chest by means of an aspirator. A portion of this was examined morphologically in stained cover-glass preparation; from another portion plate cultures were made; and animal inoculations were undertaken, as a rule, with the remainder. In this way twenty-three cases were examined. In five of these the diplococcus pneumoniæ alone was found; in three, the staphylococcus alone; in five, the streptococcus alone; in two, the diplococcus and streptococcus together; in one, the staphylococcus and streptococcus; in two, the bacillus tuberculosis; and five were found to be bacteria-free.

All the cases in which the diplococcus pneumoniæ was found accompanied acute lobar pneumonia. In two, the pleuritic exudate was serous; in one, seropurulent and scanty; in one, purulent from the start; and in two serous at first, but later purulent. In one case pericarditis was also present. In all the cases in which the diplococcus was found alone, the course of the disease was comparatively short, and recovery was rapid, though in the two empyema cases, not until resection of a rib was performed, afer waiting about three weeks in the hope that spontaneous resorption might occur.

In one case in which the examination was undertaken four days after crisis of the pneumonia, though the diplococci were seen on microscopical examination to be very plentiful in the exudate, both cultures and animal inoculations were negative, suggesting the death of the diplococci at the time of or very soon after the crisis. This observation is of interest in connection with what is known regarding the short life of the diplococcus pneumoniæ in pure cultures, and suggests a possible explanation of the shorter course and more favorable outcome of pleurisies caused by that germ.

Prince Ferdinand has found record of two hundred cases of pleurisy in which the diplococcus pneumoniæ was found alone.

The etiological relationship of the ordinary pyogenic bacteria to empyema has long been universally admitted, but it is only recently that attention has been called by Levy to the fact that they may also be the cause of serous pleurisy not advancing to purulency. This observation has been confirmed by Prince Ferdinand in two of his cases in which the staphylococcus alone was found. In both of these the course of the disease was comparatively short and recovery was perfect; in the first case without operative treatment of any kind; in the second, after aspiration alone.

Of the eight cases in which the streptococcus was found, four followed influenza, two pneumonia. In two the exudate was at first serous, but afterward became purulent; the others were empyemas from the start. All were severe cases, necessitating resection of ribs. Three ended fatally, and in the others convalescence was very slow.

It has long been supposed that many cases of pleurisy with effusion have their origin in a tubercular process in the pleura. Considering the difficulty attending the detection of tubercle bacillus in such fluids, the failure to find it in suspected cases has not been regarded as opposed to this view, and recently its detection in the exudate in thirty-one cases of pleurisy has led some to express the belief that all cases in which bacteria could not be found in the exudate must be tubercular. While pointing out the fallacy of this extreme view, Prince Ferdinand is still forced, as the result of his studies, to admit that a very large number of such pleurisies must have such origin. In five of his cases in which bacteria could not be detected in the pleuritic exudate, he was able to find unmistakable evidence of tuberculosis of the lungs (physical signs, tubercle bacilli in the sputum, and, in two cases, autopsy), and in two empyema cases, which at first failed to reveal bacteria, tubercle bacilli were discovered after more careful examination. He therefore concludes that, when there is no history of acute pneumonia or neoplasm of any kind, when there is little tendency to absorption of the exudate, and particularly if it be at the same time sanious, the failure to find bacteria in the exudate may be regarded as strongly pointing to a tubercular origin of the pleurisy.

The bearing of these facts upon prognosis and treatment is not far to seek. Prince Ferdinand groups the various pleuritic exudates in an ascending series as regards intensity as follows: (1) Serous pneumococcus exudates. (2) Serous staphylococcus exudates. (3) Pneumococcus empyemas. (4) Staphylococcus empyemas. (5) Streptococcus empyemas. A bad prognosis also naturally attaches to exudates resulting from tuberculosis and sepsis.

The streptococcus exudates, being the most severe, should be radically treated by early resection, even though they be serous at first, for they will most certainly later become purulent. Unless thus early and vigorously treated these cases are apt to prove very severe, and often fatal as the result of septic absorption.

In the case of the staphylococcus exudates the problem is somewhat more difficult, as the prognosis is much less certainly bad. Aspiration and careful observation of the course of the disease are here recommended, when the exudate is serous. If it become purulent, however, it may justly be considered that the process is becoming more intense, and resection is then indicated.

When the diplocoocus pneumoniæ is determined to be the cause of the exudate, whether serous or purulent, the prognosis may be regarded as good, other things being equal, and Prince Ferdinand recommends waiting for about three weeks before resorting to radical operative treatment, in the hope that spontaneous absorption may take place. Even then he advocates thoracentesis first, trusting that no second accumulation of pus may occur. If this, however, should result, nothing remains but resection, and a speedy cure may be expected after thorough drainage of the chest.

In conclusion, Prince Ferdinand strongly urges the bacteriological examination of the exudate in all cases of pleurisy, and the importance of making the treatment accord with the information so obtained.

It may be questioned whether Prince Ferdinand's statement, that the exudate in streptococcus pleurisies inevitably becomes purulent, is not somewhat too sweeping, as Goldscheider (*Zeitschrift für klinische Medicin.*, 1892, XXI, 363) has recently reported three such cases in which the exudate remained serofibrinous throughout the course of the disease, at no time being purulent. There can be no doubt, however, of the correctness of Prince Ferdinand's conclusion as to the comparative severity of the streptococcus cases, and the need of earlier and more radical treatment for them.—*American Journal of the Medical Sciences.*

PHYSIOLOGY OF THE HEART.

Germain Sée (*Le Bull. Méd.*, January 25) says that the cardiac system comprises three distinct elements, the muscle, the vessels, and the nerves, which are themselves of three orders:

(1) The cardiac muscle, or myocardium, governs the entire circulation, since, as proven by recent observation, it exercises an absolute and independent automatic power, scarcely modified by the functions of the other organs of the motor apparatus of the blood.

(2) The vessels, especially the arterioles which may be taken as a type, constitute cylinders, tubes at times elastic as rubber, and contractile as smooth muscular organs; the elasticity, a passive property, when put into operation, furnishes an obstacle to the progress of the blood; the contractile activity reduces the calibre of the vessels and retards the circulation. The vessels are not, therefore, as has been recently suggested, a peripheral heart; the contrary is true; they are most often the antagonists of the heart, or at least, obstacles to the course of the blood (Dastre and Morat, 1884). This is especially seen when the tubes have lost their elasticity, as in arteritis, sclerosis, atheroma, and especially in calcification, where the tubes become rigidly, inflexible as incrusted canals.

(3) The nervous organs are of three classes. The first comprises the ganglia, to which has been ascribed the power of motor innervation, or the faculty of arresting motion. The most recent works have justified this hypothesis, so

generally admitted. None of the ganglia, neither Ludwig's, Bider's, nor Remak's, possess an impulsive property. The heart is endowed with automatism and autonomy. Its movements, once established in their rhythm, and according to the laws of activity of muscles, may be augmented in number by the sympathetic nerves, called accelerators, radiating from the spinal cord, or diminished by the indefinite nerves, called depressors, radiating from the medulla oblôngata; this is the rôle of the second series of nerves.

The last series, is, on the contrary, a true regulator of the tubes of escape. It is composed of two classes of nerves; in the first place by the vaso-motor *constrictor* nerves, which have their center of origin in the bulb; when these nerves are active the vessels which they supply contract and impede the transmission of the blood towards the periphery. If, on the contrary, the vaso-motor constrictor center, the source of the nerves of this name, becomes paralyzed, all the vessels of irrigation are relaxed; the vaso-motor paralysis has relaxed their walls. The other form of vaso-motor nerves is that known as the *vaso-dilators;* by their excitation they produce dilatation, the same effect as is produced by a paralysis of the vaso-constrictor center. The paralytic relaxation of the vessels or their true dilatation, tend in certain conditions to a favorable result for the heart; they are the indirect means of progression. The constrictor nerves, stimulated in their center or in their periphery are, on the contrary, the means of reduction of the circulation.

The ganglionic masses and their respective rôles in the functionating of the heart, have been variously interpreted and recently discussed in a new sense. Their situation was discovered by Woldrige (1883) and Tigerstedt (1884); their functions were gone over by His and Romberg in 1891, and definitely fixed by Krehl and Martins recently (September, 1892). The extra-cardiac nerves coming from the vago-sympathetic nerve, pass to the posterior surface of the bulb of the ascending aorta, and are directed towards the upper surface of the pulmonary artery. There, they divide into two networks, one of which, called bulbar, descends towards the ventricles, and the other, or anastomotic network, passes between the bronchial tubes and the pulmonary artery toward the auricles to constitute the auricular plexus. There are, therefore, a bulbar and an auricular network, together with an anastomotic plexus. The ganglia are collected in large number at the point of division of the bulbar and anastomotic plexuses; they are well surrounded by large arteries. Below the point of separation of the coronary artery, which, in the rabbit, enters immediately into the cardiac muscle, there are but few ganglia situated at the lower border of the arterial cone.

The ganglia are everywhere nestled in the lâx cellular tissue of the pericardium, or its prolongations between the aorta and pulmonary artery; they penetrate into the partition between the auricles, never into the compact muscular bed. The ventricles have only a few isolated ganglia situated on the upper border of the arterial cone. The inter-ventricular wall in particular is deprived of ganglia; it is this part of the wall which is the seat of the probable center of coördination which Gley and Sée have described after Kronecker and Schemey.

Sée concludes as follows:

(1) The cardiac ganglia do not possess most of the functions which have been attributed to them; they certainly are not, as has been said, the vehicle which governs all and in all. They are slight organs of sensibility.

(2) It is the cardiac muscle which is supreme; it is not only the automatic motor of circulation. After various diminutions in its power, it may itself repair and compensate for all in overcoming resistances, in emptying the surcharged ventricles, and all this by the overwork which the heart executes without having recourse to nervous influence.

(3) The heart has in itself a dynamic reserve, and it is from this that its enormous power comes; the alterations of this organ should be taken into consideration when there is a local lesion, valvular or not, or a lesion of general origin. In one or the other case it is necessary to attend to the ultimate changes of texture rather than have recourse to the common explanation of fatigue or dilatation of the heart, which cannot be denied.

(4) Functions of the ganglia and nerves. The researches of His and Remberg, which have preceded those of Krehl and Martins, are still more explicit in certain points. The nerves of the heart they say, do not develop with the heart, in the heart, but they proceed from the vagus nerves and from the sympathetic, to penetrate into the heart.

The cardiac ganglia are not sympathetic, and without doubt constitute centers of sensibility; they have no influence upon the arrest or upon the acceleration of the heart.

(5) The cardiac muscle, on the contrary, works without any nervous excitation—it works automatically, and by its proper force; it is in the heart itself that it finds the impulses to its activity. The idea of a cardiac nervous center, itself automatic and motor, is therefore without foundation.—*Medical and Surgical Reporter.*

A CASE OF BIRTH IN THE COFFIN AFTER MATERNAL DEATH.

A case reported in (*Kreisphysikus zu Schlochan in Westpreussen*, Band III, 1893) by Bleisch has caused the author, Dr. Moritz, to report one of similar character. The patient, aged fifty-five, fell in labor on Sunday, June 19, at 12 P. M. She was attended by a midwife who examined her while having severe contractions on the lap of the husband, but decided that she could not deliver the child. She was brought to the edge of the bed, the midwife again using various manipulations with no offect. While she distinctly felt the head, according to her statement, she was still unable to deliver. At 7 A. M. the patient died without having given birth to the child. The funeral took place three days later. Owing to a denunciation made by the gendarmes on July 5, against the midwife as a causative factor in the death of the patient, the corpse was exhumed thirty-eight days after death and thirty-five days after burial.

(*a*) *External Appearance.*—The female corpse one hundred and fifty-seven centimetres long, well-supplied with fat; muscles well developed. The skin is generally moist; whitish-gray color; face greenish-gray and swollen. The back, breast and abdomen greenish-gray and moist; and the inner-sides of the thighs are soiled and grayish red. The entire body is covered with blisters varying from the size of a pea to that of a hen's egg, and filled with decomposing gases and moisture. The odor was unpleasant; the upper and lower extremities was freely movable. The eye-balls are softened and deeply retracted. The lips bluish-black and moist. The abdomen markedly distended.

Between the thighs lay the corpse of a male child, two and three-fourths kilogrammes weight, forty-nine centimetres long, and otherwise being a fully developed fœtus. The child lay with its back upwards and the head near the knees of the mother, facing the left side of the mother. The cord was forty-seven centimetres long, the size of a lead-pencil in thickness; bluish-black in color and soft in consistence. The placenta was a bluish-black softened mass, and was almost entirely extruded from the vaginal tract. It was attached in one portion to the uterus, this latter being almost entirely inverted, and presented a large mass the size of a man's head. There was, therefore, total eversion of the uterus together with the vagina. The mucous membrane of both presented a smooth, slimy, reddish-gray surface with green spots, only at the place of attachment for the placenta was the surface rough and greenish-black. The labia majora were almost obliterated, and but traces of the labia minora could be detected between the former and the uterus.

(*b*) *Internal Examination.*—The cranial cavity: In opening the cavity the brain was found to have changed to a thin, reddish-gray, offensive mass.

The thoracic and abdominal cavity: The thoracic organs show nothing more than advanced stages of decomposition. The intestines contained in the abdominal cavity are markedly distended. The uterus cannot be found in the abdomen. The region where the uterus had been is marked by an oval opening three centimetres long, and a half centimetre wide. On the margins of this opening are seen radial folds. Pressure upon the inverted uterus causes a discharge into the abdominal cavity of foul-smelling gases which cause collapse of the organ and permits its reposition. The walls of the uterus are about six milimetres in thickness, and uninjured. The conclusions arrived at are the following:

(1) The patient died previous to delivery. (2) It was not possible to determine definitely the cause of death by section alone, since decomposition had advanced too far. (3) It is impossible to tell if the patient died of hæmorrhage, or if death was caused by a third person. The explanation for the birth in the coffin is that by generation of the decomposing gases, the child was expelled from the uterus by mechanical pressure.

In closing the author states that in his case there was a certainty that the patient died before giving birth to the child; that at the time of burial, three days later, the child was still in the uterus, and, for that reason, post-mortem power contractions could not be thought of; while on the other hand, the presence of decomposing gases in the abdomen of the corpse were sufficient to cause the expulsion of a normally presenting fœtus.—*Vierteljahr f. gericht., Med.* January, 1893.—*Medical and Surgical Reporter.*

CHOLERA TREATED BY INFUSION.

Samule's method as summarized by Kutner, is as follows:

(1) *The Time.*—Immediately upon the failure of opium or tannic acid, enemata to control the loss of serum, or when the radial pulse becomes anomalous, subcutaneous injections should be used.

(2) *The point of injection.*—The infraclavicular fossa should be chosen, and should be used alternately. If absorption from this point ceases, the supraclavicular fossa must be chosen.

(3) The infusion is used continually during the stage of asphyxia in the typhoid stage. He injects first two ounces of the fluid, waits until this is absorbed and then injects two drachms more, and continues in this manner until the pulse is reëstablished. If a swelling forms at the site of injection, he waits until the fluid is absorbed or selects another point. If the pulse is present this is repeated every five minutes. If it is entirely full it is repeated every half hour. Usually, eight to ten quarts are used in a single case.

(4) The fluid is made by adding one drachm of pure salt to one quart of distilled water. The temperature must be between 102° and 104° Fahrenheit.

(5) *Instruments and technique.*—Over the head of the bed should be placed an Esmarch's irrigator with tube and stop-cock, or Collin's transfusion apparatus may be used. This consists of a funnel of about four ounces capacity, a pump, a chamber from which the fluid is distributed, an elastic tube, trocar, and cannula. With a fine trocar an opening is made in the infraclavicular fossa, the stile is withdrawn and the cannula allowed to remain in place. The gum tube is now attached to the cannula, the stop-cock opened and the fluid allowed to flow. If the liquid is not absorbed with the aid of massage, then a second trocar and cannula are inserted in the other infraclavicular space and injection begun there. The convalescence of patients must be carefully watched; they are apt to attempt to overtax their strength. Scarcely any food must be allowed at first. The result of such treatment is surprising. The sooner the operation is performed the better the results. First, the pulse returns, usually in the first half hour; then the cold, staring eyes assume a natural appearance; the painful breathing becomes quiet; the face muscles lose their rigidity; the skin becomes warm; a slight sweat appears finally, and usually, not before the eighteenth hour after the operation is begun, the secretion of the urine is reëstablished. During reaction diarrhœa of fetid stools occurs; this, however, is a sign of convalescence.—*University Medical Magazine.*

SURGERY.

APPENDICITIS APHORISMS.

STATISTICS show that an appendicitis patient may be expected to recover several times, and to die once.

The appendix vermiformis should be removed as soon as a diagnosis of the appendicitis is made, because no one can tell at just what moment necrosis is going to follow the disturbance of circulation.

It matters not whether the swelling which cuts off the circulation of the appendix is caused by the usual catarrhal process, or by fecal concretions, or by foreign bodies. The mucous tube cannot swell readily within its inelastic sheath, so it chokes itself to death at any hour in the course of any attack.

The operation should be done at any stage of the disease in which the surgeon finds the patient, because the surgeon's methods are certain and safe, and nature's methods are uncertain and risky—speaking by comparison.

In patients who had recurring appendicitis the appendix should be removed, even if there have been no recent attacks, because trouble may come when the patient is on the ocean or in the woods, away from skilled surgical help. Those who object to the proposition have never seen the horrible, black, stinking, ragged little crater that suddenly begins to erupt among an unsuspecting patient's vitals.

An appendix that has once been inflamed is a disabled appendix when adhesions bend it or compress it, because it cannot again swell evenly.

If the physician thinks that his patient is in luck because an appendicitis abcess has opened into the intestine and discharged its contents, he is badly mistaken. The rotting debris that remains is likely to set up a dangerous septicæmia, unless the surgeon opens up the tract from another direction and puts the poison all into a pail.

Resolution after the expectant plan of treatment means that peritoneal protecting exudates have become absorbed, or post-peritoneal cellulitis has subsided, leaving the treacherous bit of gut free to strike when nature's guard is down, if it wishes.

The plan of simply opening an appendicitis abscess and failing to hunt for multiple abscesses, or to remove the appendix remains, is a bungling, incomplete, unsurgical plan. (I hope that certain ones of my earlier patients will not read this. Two of them will not, that I know.)

The surgeon who operates with the patient in any position excepting Trendelenburg's, fails to give his patient the advantages that he is morally bound to give him. With the patient in Trendelenburg's position we can work by sight, removing pus and debris, and separating adhesions with the least possible necessity for handling intestines. Very often nothing is seen of viscera, excepting the appendix and a few inches of colon, during the entire operation.

The incision should be over the normal sight of the base of the appendix, in a line parallel with the middle line of the abdomen, because that incision gives the best opportuunity for exposing the appendix and closing the abdominal wall securely against hernia.

The operation for appendicitis is not to be attempted by men who have not had previous experience in abdominal surgery in man or the lower animals. Otherwise statistics will be against the right.

The appendix should be removed close down to or fairly into the cæcum, because the tissues of the appendix retain their bad character among good surroundings, and secondary perforation is likely to take place close to sutures or ligatures which are situated in appendix tissue proper.

The little collar of mucous membrane which pouts into the cæcal opening when the appendix is removed should be ligated with the finest of strands, and then trimmed close to the ligature to prevent infection from the cæcum,

A separate layer of small sutures should be used for bringing together the muscular walls of the cæcal wound, because nice apposition is necessary if we wish to leave no weak spot in the intestine.

In the intraperitoneal cases the margins of cæcal peritoneum which fall together when the muscular walls are sutured, must be scarified until pink serum exudes, then the scarified peritoneal surfaces are sutured over the wound for extra protection. The necessity for scarifying peritoneum is realized only by surgeons accustomed to experimental abdominal work.

We must depend upon deliquescent salts in the colon for drainage, as a rule, because drainage apparatus would leave a weak spot in the abdominal wall, and drainage apparatus fails in its purpose as soon as adhesion can wall it off.

In closing the abdominal wound peritoneal margins should be closed with a separate line of sutures, because properitoneal hernia might othewise develop, and because a gaping of peritoneum would leave out one little element of strength in the wall.

The cut facia or tissue of the oblique and transverse muscles must be closed with a special tier of sutures, because the fibres drawing in different lines would otherwise make an uneven scar and leave a weak spot.

The superficial fascia is so very important at the site of the operation for appendicitis that it must be honored with a separate tier of sutures, because if we tried to suture skin and superfiical fascia with the same tier of sutures neither tissue would be neatly cared for.

The death-rate after the operation should not be above one per cent., and that percentage caused by complicating diseases, in cases in which a skilled surgeon can operate without hindrance at the time of his choice.

The death-rate should be not far from twenty per cent. in cases in which the surgeon has to wait for all of the family and all of the consultants to tell him when it is time to operate for appendicitis.—Dr. R. T. Morris in *Medical Record.*

ON SOME FALLACIES INHERENT IN THE PARASITIC THEORIES OF THE ETIOLOGY OF CARCINOMA.

Within these last few years, in which the science of bacteriology has made such mighty strides, the etiology of many diseases, which before had been obscure, has been placed upon a sound basis by the irrefutable demonstration of their bacteriological origin; and at the present time, so many diseases have been referred to the kingdom of parisites for their etiology that it has almost seemed that ere long the most of pathology must have for its basis some of the lower vegetable or animal forms. Observing the tendency of this great current, many far-seeing pathologists have hinted at the bacteriological origin of this or that disease, and have won glory when, in the course of time, their wise predictions have been conclusively proven and universally accepted. So striking have been these revelations that it would seem that one could scarcely go amiss in surmising at etiology along this line. This enthusiasm has led a host of pathologists, who, observing the already demonstrated causes of the gumma, the tumor albus, the xyloma, the actinomycosis granuloma and many others, to seek for similar causes in other tumors of unknown origin.

The great amount of study which has been given to the subject of carcinoma has, as yet, failed to establish sufficiently the nature of the disease. The theory of Cohnheim, incomplete, as it is, stands at the present time for our most advanced views on the subject. The parasitic theory of the etiology of carcinoma was long ago hinted at. In 1847 Virchow observed the peculiar minute bodies between the parenchyma cells and also within the cells themselves, which have since been identified as spinozoa. This unicellular animal body has of late been the object of much observation. It has been given its biological place among gregarinidæ. Pfeiffer observed bodies which he called sporozoa in both sarcoma and carcinoma. This same class of parasites has been discovered in certain skin diseases, and notably those in which there is a tendency to heterogenous proliferation of epithelial cells. Wickham, Darnier, Hacke, Malassez and Albarran, Steinhaus, Strobe, Vincent, Foa, Van Henkelom and Thoma, have all reported such parasitic cells in carcinoma, and the first two observers have regarded them as the probable cause of the disease though they cannot be demonstrated as etiological factors, nor have cultures or inoculations been made. On the other hand, Russel, Pifford, Schutz, Cornil, Hausemann, Török, Ribbert, Tommasoli, Duplay, Cazin and others, who have observed these bodies, incline to regard them not as parasites, but as products of cell degeneration or as karyokinetic nuclear changes.

Within the past year three works on the subject, by Podwyssozki and Santschenko, Sondakewitsch and Noeggerath, have appeared. The first two speak with great assurance on the presence of parasites in carcinomatous cells; though after their exhaustive research, they conclude that neither the observers, who claim the presence of sporozoa in carcinoma, nor those who deny their presence, have sufficient ground for their dogmatic claims. Stroebe, who has observed and delineated these bodies, does not feel convinced of their parasitic nature, because of the difficulty of excluding the question of nuclear degeneration.

Observations have also been made in the line of the discovery of bacteria in carcinomatous growths. Rappin claimed to have discovered a diplococcus as the cause of carcinoma, and even to have inoculated rabbits with positive results. Scheurlen found a spore-forming "carcinoma bacillus," which he was able to cultivate on gelatine and potatoes. But these observations have been long since thrown aside, either on the ground of inaccuracy or the want of further proofs.

Finally, we have the elaborate researches of Adamkiewicz, just published. The wide-spread attention which they have received, and the immediate clinical application to which they have been put, entitle them to a more complete analysis in this paper. Adamkiewicz holds that carcinoma presents all the characteristics of a chronic infectious disease, but not being able to discover the parasite of the disease, we have too readily fallen back upon the old hypothesis of Cohnheim. He refuses to recognize carcinoma cells as identical with epithelial cells, and points out that they present three forms in the course of their development. The young form is that resembling the leucocytes; in a higher stage of development they approach the epithelial cells; and, lastly, they become carcinoma cells, with their tendency to the formation of irregular projections, and finally to degeneration and disintegration. This degeneration in the later stages he regards as a feature of differentiation from the epithelial cells. He assumes that carcinomatous tissue possesses toxic properties, and proves it by inoculating animals with bits of tumor and by injecting filtrated watery extracts, producing death in a few hours or days. This special poison he has called cancroin. It seems, without doubt, to him that carcinoma is a parasitic disease. The parasite not growing on the usual culture media, he undertook the use of living tissue in its stead, and planted bits of carcinoma in the brains of rabbits.

The carcinoma cells were observed to migrate from the implanted particles in the direction of the least resistance along the clefts in the cells in the brain-substance, to become implanted and form nuclei for further propagation. Therefore, he concludes that the carcinoma cells are to be regarded as living creatures, and are themselves the specific parasites of the disease. To this parasite he has given the name coccidium sarcolytes, and this is the source of the cancroin, the irritating action of which causes the changes in normal tissue.

When we now come to sum up these observations, we see the very conflicting opinions of accurate observers, and the diametrically opposite conclusions at which many have arrived. The theory of the bacteriological origin of carcinoma gave place, among those who sought for a parasitic etiology, to the sporozoa or coccidia. Against these stand the views of a great number of observers who believe that these bodies, which have been interpreted as animal parasites, are the products of disintegrated nuclei, or nuclei in the process of mytosis. The whole evidence of their parasitic nature is based upon the insufficient ground of their appearance within or among the carcinomatous cells. They have not been isolated or cultivated outside of these cells. The microscopic appearance alone is inadequate for the basing of such a conclusion. For example, I may cite the deception occurring in fat cells, by which the intracellular septa, when stained, present the appearance of tubercle bacilli, a thing which Orth has regarded of sufficient importance to be made the subject of an essay. The pronounced tendency of carcinoma cell nuclei to disintegrate, and the mytosis occurring in the younger cells may well account for these peculiar appearances.

The fact that certain granulation tumors are of infectious origin does not justify the conclusion that carcinoma, clinically and histogenetically different, has a similar cause. The transplantation or infection with carcinoma cells is nothing more than can be done with the skin, periosteum or other tissues, and occurs in the benign as well as malignant growths. With the granulation tumors it is different. A secondary growth of tubercular or syphilitic tissue is not brought about by the transplantation of the cells making up the growth, but by the transplantation of the specific microörganisms by the blood, lymph or other channels, the irritating products of which give rise to the peculiar productive inflammatory process. The cells of such a secondary deposit are by no means descendants of the cells of the primary growth as are those of carcinoma, which when implanted remote from the mother tumor, continue to produce cells of the parent type, the preëxisting cells taking no part in the formation of the characteristic parenchyma. The only means by which secondary deposits can form from carcinoma is through this transplantation or metastasis of carcinoma cells, which is facilitated by the peculiar anatomical nature of the tumor. If, then, there are specific parasites for carcinoma, they must possess a predilection for epithelial cells, and be transmitted by the cells to the localities in which metastasis develop, and yet not invade the cells of this new locality, even though they be epithelial in character. The parenchyma of a metastasis in the liver of an epithelioma of the tongue presents the peculiarities of epithelial cells of the tongue. The flat epithelial cells proliferate among the polyhedral liver cells, which play only a passive part.

It has been my fortune to observe a primary carcinoma of the liver with multiple secondary deposits. On cutting into these secondary nodules, which were scattered along the post-peritoneal lymphatics, a greenish-yellow fluid exuded which responded to the tests for bile, and the cells of these nodules were anatomically identical with liver cells. Examples of this sort, showing that in the metastasis of carcinoma the parenchyma repeats the type of the epithelial cells from which the primary growth sprang, might be indefinitely multiplied.

These facts speak against the microbic theory of carcinoma, and quite refute the doctrine of Adamkiewicz, which asserts that the characteristic neoplasmic cells themselves are not epithelial cells, but are parasitic bodies. How he accounts for these bile-secreting parasites is hard to conceive. Furthermore, it is not difficult to make a section at the edge of a carcinoma, including some of the normal tissue, in which the normal epithelial cells may be traced as directly anatomically continuous with the parenchymatous cells of the neoplasm. The same thing is seen in the adeno-carcinomata so common in the stomach and rectum, in which adenomatous cells merge into the carcinomatous cells.

If the parasitic theory be accepted, it must be reconciled with the other malignant tumors, and also with the so-called benign growths which give rise to metastases, and which have so much in common with carcinoma. The fact that the carcinomata are anatomically related through the endotheliomata and peritheliomata to the malignant sarcomata on the one side, and that they are allied through the adeno-carcinomata to the benign adenomata on the other side, places another difficulty in the way of this hypothesis. This similarity may be further traced in the etiological factors strikingly common to all tumors, which may be spoken of as mechanical or chemical irritation, or influences which hinder in some way the development of cells within their normal limitations. The epithelioma of the lower lip of pipe-smokers, the chimney-sweep's carcinoma scroti, the "paraffine cancer" of paraffine workers, carcinoma of retained testicle, epithelioma of the tongue opposite the sharp edge of a carious tooth, are but a few of the well-known examples. In scar-tissue of the soft parts develop carcinomata or sarcomata; at the seat of fractures appear chondromata, osteomata or sarcomata; from chronically inflamed mucous membranes develop polypi, adenomata or carcinomata; and so on examples might be multiplied. The tendency of an heterogenous proliferation of epithelial cells at the seat of a lupoid inflammation gives a glimpse of bacterial products acting as a cause of epithelial misdevelopment. In the edge of a healed gastric ulcer the epithelium is observed to send down chains infiltrating the underlying tissue. As a rule this carcinoma-like condition gives rise to no further growth, but when, for some reason, the physiological equipoise between the aggressive tendency of the epithelium and the resisting tendency of the surrounding cells becomes disturbed, from precisely this locality carcinoma develops.

Nor do the malignant tumors alone give rise to metastases, for multiple developments of chondromata, lipomata, fibromata, myomata, papillo-cystomata and in fact, all the new growths, benign or malignant, have been observed to proliferate in this manner.

It would be superfluous to multiply evidence showing the etiological and anatomical features common to all tumors. No parasitic origin can be suggested for any of these excepting carcinoma; and in view of this fact, and in view of the fact that the evidences of the parasitic etiology of carcinoma are so imperfect, we must still regard the new growths as either belonging to the class of misdevelopments, or as being due to some cause exciting the fixed cells to a greater than normal activity.

The most plausible of parasitic theories is that of the sporozoa. Its right to consideration as an etiological factor of carcinoma is, however, nullified by the fact that its champions are contradicted by an equal number of equally accurate observers. The doctrine of the bacterial cause is to-day quite unchampioned; and, finally the theory of Adamkiewicz is unnatural and illogical. The hypothesis of Cohnheim, though not histologically substantiated, still stands as accounting for many inexplicable phenomena. It is, however, within the range of the greatest probability that the cause of tumors has been sought for too wide away from the real nature of things, and that it lies nearer the ordinary and constantly operating phenomena, and not among the rarer and more remote biological possibilities. In such simple growths as clavus no far-fetched etiology is sought, but simple mechanical irritation satisfactorily accounts for the piling up of epithelial cells. May we not presume, then, that chemical or mechanical irritation, *per se*, may be a cause of carcinomatous degeneration without complicating the etiology still more by the hypothesis that such irritation is a cause only as it impairs the cell vitality and renders it an easier prey for the specific microörganism? The expression "irritation," for want of a better term, must stand for inflammatory processes giving rise to parenchymatous or interstitial cellular changes.

Mr. Darwin has shown that habits or induced conditions acting continuously through a number of generations finally become engrafted upon the line, and are transmitted as instincts or inherent qualities; and it is not possible that epithelial cells, which for a series of generations have propagated under such abnormal conditions as have caused and as exist in a primary carcinoma, may become endowed with the pernicious vitality which finally characterizes the metastatic growth?—*Annals of Surgery.*

OBSTETRICS.

CÆSAREAN SECTION IN PLACENTA PRÆVIA.

Dr. Ford formulates the following conclusions: (1) The dangers of placenta prævia, as well to the mother as to the child, are due to the development of the placenta upon the lower uterine segment, and to the canalization of this segment during labor. (2) While the first of these conditions cannot be avoided, the second should not be permitted in placenta prævia totalis or partialis. Delivery should be by Cæsarean section. (3) In placenta prævia marginalis, if the circumstances were favorable, the os easily dilatable, the condition of the mother and child good, the head presenting or capable of being steadily brought to engage, and the hæmorrhage arrested or moderate, it would be well to follow the method of intrauterine and vaginal tamponade, and deliver by forceps if the child should be in danger. But if the os were rigid, the hæmorrhage profuse, the presentation lateral, the cord prolapsed and not reducible, or the fœtus evidently suffering, immediate recourse to Cæsarean section should be had. (4) The Cæsarean section should be performed as soon as the diagnosis is established and the condition of the mother permits, to the exclusion of all other methods, as an elective and primary operation, in all cases of placenta prævia totalis and partialis, and as soon as the conditions warranting it, in placenta prævia marginalis, have been satisfactorily determined. (5) In the two graver forms of placenta prævia the Cæsarean section should be practiced as a prophylactic measure, in place of any attempt to deliver by the natural passages, after the first hæmorrhage. (6) In cases where hæmorrhage is late or sets in only as labor begins, and where consequently, the placenta is most probably attached laterally, it is advisable, until this entire subject has been practically studied, to deliver per vaginam as a rule. If, therefore, the cervix be easily dilatable, and the hæmorrhage moderate, we may proceed as suggested in the more hopeful cases of marginal implantation. But even here, an undilated os associated with severe hæmorrhages would constitute a very serious condition. If the rigidity were due to fibrosis, it should be abated by multiple incisions; if to carcinoma, the radical Cæsarean section would be indicated. If the cord were prolapsed, and after reposition still descended, the os being partly dilated and not dilatable, dangerous hæmorrhage continuing meanwhile, the Cæsarean section would be unquestionably indicated for the safety of both mother and child.—*American Gynecological Journal.*

PATHOLOGY.

INFLUENCE OF WATER RICH IN SALT UPON THE DEVELOPMENT OF CHOLERA BACILLI.

Aufrecht (*Centralbl f. Bakt.*, Band XIII, Numbers XI and XII) found that the refuse water of certain soda and potash works caused the percentage of salt in Elbe water to be considerably raised. Investigating the bearing of this fact upon the development of cholera, he found that comma bacilli grow as well upon nutrient gelatine made with this water as upon gelatine to which crystallized soda in the proportion of one per cent. has been added, as recommended by Dahmen. This observer has shown that cholera bacilli grow much better upon the latter medium than upon the ordinary alkaline gelatine. It appears, therefore, that the Elbe water strongly charged with salt favored the development of cholera—Trenkmann (*ibid.*, Band XIII, number X, shows that the development of cholera bacilli in sterilized spring-water is much favored by the addition of salts of soda and potash to the water. In unsterilized spring-water the nature of the salt added has an important bearing upon the development of saprophytes and comma bacilli respectively. Thus, the addition of common salt favors the development of the former, whilst if a mixture of common salt and sulphate of soda be added a great increase of cholera bacilli is evident, in contrast with which is the comparatively slight increase of saprophytes; further, several varities of the latter disappear altogether.—*British Medical Journal.*

LEUCOCYTES IN INFECTION AND IMMUNIZATION.

Mlle. Everard and MM. Demoore and Massart (*Ann. de. 'l Inst. Pasteur*, February, 1893) have made an experimental study of the quantitative and qualitative variations of the leucocytes during infection and immunization. They describe three forms of leucocytes. The first are small, with a single, compact nucleus which stains deeply with hæmatoxyline; the protoplasm is small in amount, and stains slightly with eosin. The second are large leucocytes, with a single vesicular nucleus which stains feebly with hæmatoxylin, and is spherical, reniform, horseshoe-shaped, or even annular in form; the protoplasm is abundant and homogeneous, staining freely with eosin. The third are large leucocytes, with an irregular, polymorphous nucleus usually composed of deeply-staining masses united by tender filaments; the protoplasm is abundant, and contains granules which are stained by eosin. The authors claim to have met with intermediate forms between each of these three forms of leucocytes. Their experiments show that the injection of living or dead cultures causes at first a diminution of the leucocytes of the third type (hypoleucocytosis). The leucocytes are few in number in those animals succumbing to infection, while in vaccinated animals the blood is particularly rich in leucocytes of the third type (hyperleucocytosis). These authors regard the three forms of leucocytes which they have described as different phases of evolution of the same cell. The leucocytes of vaccinated animals differ from those of the untreated animal, not only by the education which their chemiotactic properties have received, but by the rapidity of their development. They arrive more quickly at the third stage, when they can most efficiently engage in the struggle against the microbes. The leucocytes have a very ephemeral existence; those which intervene to render an animal refractory are descendants of those which were effected by the vaccination, and hence they must transmit their acquired characters to their descendants. Since all properties of organic cells which are unneeded tend to disappear, it is indispensable that the leucocytes should have, from time to time, an opportunity of exercising their phagocytocic properties.—*British Medical Journal.*

OPHTHALMOLOGY.

SIMPLE METHOD OF OPERATING FOR PARTIAL TENOTOMY OF THE RECTI MUSCLES (GRADUATED TENOTOMY).

Dr. Eugene Smith (*Archives of Ophthalmology*, January, 1893), on the basis of several years' experience in the following simple manner of making partial tenotomy of the recti muscles in heterophoria, gives it to the profession with the remark that it is as effective as it is easy.

The instruments required are an ordinary stop speculum, a small triangular knife, the stop keratome of De Wecker, and a peculiar ring forceps, each branch of which ends in a sharp hook. When closed the forceps form a small ring at the points. Under cocainization the eyelids are held open with the speculum, the belly of the muscle is seized at the equator of the eye, while the patient looks in the direction opposite the muscle to be operated on—that is, inward, if the external rectus is to be cut. The full width of the muscle and the conjunctiva over it are seized with the forceps, the sharp points of which pierce the conjunctiva and grasp the muscle, holding it securely in the ring. The muscle is then drawn away from the eyeball in such a manner as to put the tendon on the stretch, while the point of the triangular knife is pushed through the conjunctiva and centre of the tendon at its attachment to the sclera. If, in the judgment of the operator, the division of the tendon made by the forward movement of the knife is deemed insufficient, or found to be so on testing, the muscle is again seized with the forceps, the knife again entered at the same wound in the conjunctiva, and by lateral movements the tenotomy is enlarged. The small wound in the conjunctiva usually closes by its own elasticity, the bleeding or effusion beneath the conjunctiva is slight, and seldom does over-correction occur. No dressing is required.—*Therapeutic Gazette.*

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

THE MEDICINE IN SHAKESPEARE.*

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AUTHOR OF "SIR FRANCIS BACON'S CIPHER STORY," "THE CIPHER IN SHAKESPEARE," ETC.

"All the world's a stage, and men and women merely players," and from time to time in the tragedy of this world's history there appears amongst the actors of this earthly theatre some wonderful performer who embodies, perhaps, the inventive genius of a whole decade. Perhaps some new and startling religious truth is acted out, or some great literary achievement. Amongst these wonders of mental development there will be one who stands out as clear and full of glory as the cameo cut upon the finest gem, and this superlative genius, this god amongst men, leaves his foot-prints on the sands of time, for after-ages to wonder at. Usually he is centuries before his age and is misunderstood by his fellow-man. But time brings education; and at last the truth which was at first the butt, becomes the arrow, and winged with its wisdom flies unerringly to the white centre. Such a man, whoever he may have been, was the author of the plays which lie before me. His stupendous genius was not recognized in his own day, yet under the cover of "a despised weed he has done the greatest good to mankind," teaching them to know themselves, and holding up before them the looking-glass of truth, teaching, as he did, a new language, and aptly illustrating each new thought with visible actors, who, picturing the action, taught the word. So universal was his brain that the lawyer, the astronomer, and the physician, each claims him for his own. The priest denies their claims, the scientist is sure that he belongs to him, the mystic throws aside each claim with quotations of his own, and so through, the whole category of men the brotherhood is found. But the lecturer to-night being first and foremost a member of that great profession which a god has delighted to follow, will not allow the honor to be taken from the medical profession, and will try to show he must have been (if not a doctor of medicine) a close student of our learned art. Was he an anatomist? Every portion of the human body known to his day is mentioned. Was he a student of physiology? Physiological functions are given in detail. Had he knowledge of materia medica? He speaks of many medicines, and in Romeo and Juliet, page 60, writes as follows:

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* Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

"I must up fill this osier cage of ours,
With baleful weedes, and precious-juiced flowers.
The earth, that's nature's mother, is her tombe;
What is her burying grave that is her wombe:
And from her wombe children of divers kind
We sucking on her natural bosom find;
Many for many vertues excellent,
None but for some, and yet all different.
O'mickle is the powerful grace that lies
In herbs, plants, stones and their true qualities,
Or nought so vile, that on the earth doth live,
But to the earth some special good doth give,
Nor ought so good, but, strain'd from that faire use,
Revolts from true birth, stumbling on abuse;
Vertue itself turns vice, being misapplied,
And vice sometime by action dignified.
Within the infant rin'd of the weak flower,
Poison hath residence, and medicine power,
For this being smelt, with that part chears each part,
Being tasted, slays all senses with the heart;
Two such opposed kings encampe them still
In man as well as herbs grace and rude will;
And, where the wonder is predominant,
Full soone the canker death eates up that plant."

Was he a neurologist? It might be called his specialty, and I must confess I feel hardly competent to analyze his wonderful descriptions and delineations in this great field of our science. All this lecture might be taken up with abstracts upon this one theme, for all the types of insanity are fully described and in the most beautiful language. I will but call your attention to characters and plays and leave you to study them as they should be studied, and if you will read them in the order I shall name, their greatness, grandeur and depth will appear as it is, phenomenal.

The sleep-walking dementia of lady Macbeth is paralleled by the suicidal insanity of Ophelia. King Lear's delirium is a good foil to Hamlet's feigned madness. The tragical jealousy of Othello, is a counter-foil to the comical jealousy of Master Ford. Richard the Third, Macbeth, Edmund, Malvolio, the different fools, Gonerill, Timon of Athens, and Titus Andronicus, will, in the order named, show types of either real or feigned madness, or mental instability. Notice, if you please, where Macbeth, tied to the stake rages like a chained bear, he counterparts Richard the Third's frenzy of dispair. Hamlet's knowledge "that when the wind is north north-east he knowes a hawke from a handsaw" is aptly parodied by Touchstone, who, under the cover of his folly shoots his wit, for he uses his folly as a stalking horse and shoots his quips and wisdom from that cover in an inimitable manner. Othello's "trifles light as air are confirmations strong as holy writ," for like the Tartar's bow, they fly backward to Master Ford who "searches a hollow walnut" for his wife's lover. Ophelia's pitiful singing, while floating down the stream to her death, is plainly opposite to Gonerill's mad and frantic appeal to Edgar before her suicide. When Lady Macbeth walks in her sleep, wrings her hands and in invisible water washes them, she shows quite another phase of mental disturbance than that of Titus Andronicus who sees in the queen Tamora and her two sons, the living pictures of murder, revenge and rape. Timon's melancholy madness which leads him to dig up roots and herbs with his nails to live upon, and Malvolio incarcerated in a dungeon in his full wits are beautiful specimens of different conditions of real or feigned madness.

The author of the plays must have, at sometime in his life, taken up the study of these diseases; how else could he have shown them to us in so varied a form? No member of the laity could have seen and so accurately written of them; the descriptions are too verbose not to have been the study of years. The thoughts are too widely different to have emanated from a brain that had not at one time thoroughly mastered the subject in all its branches. Bedlam was not a pleasant place to visit in his day, and even if one did visit it he could not in the darkness and stench of the noisome dungeons have seen much more than a number of raging, human animals. He would needs have gone again and again, before he could draw conclusions from his examinations. This man, however, does draw such conclusions and never makes a mistake. Hamlet rages but once in the whole play, and that is when his passion at Ophelia's brother draws him out, and he for a moment forgets his part. Ophelia lives and dies without having once given way to rage. She remains from first to last the sweet and pitiful woman, and even when her brain gives way her gentle disposition shows through the veil of madness. King Lear, on the other hand, spouts fire and thunder from beginning to end, and Timon curses his enemies without one ray of pity. His dark and morbid mind remains the same whether sane or insane. Each case is held up to the light as distinct as a sunbeam, and each type is taken from a living, breathing model, for if King Lear had at any time dropped into melancholia, or had Ophelia raged, or Master Ford committed murder, the plays would not have been worth a thought, but the great mind that conceived and wrote them, knew too much to fall into such an error, and he made the descriptions as accurate as the best text-books of the present day.

A great specialist of our own day says "one of the first symptoms of insanity is continual smiling." Turn to Twelfth Night and see how Malvolio is adjudged insane, because he came before his mistress cross-gartered and smiling. See how this master of medicine gave this truth to the world three hundred years ago. How did he know it? Where did he find it if not from the study of the insane? Do not men differ to-day as to Hamlet's mental condition? Did he not ape the real article so well that the picture is too life-like not to be misunderstood? Was he really or only feignedly insane? I might go on with this interesting study all the evening but as there are other things hidden in this box of wonders, I shall be forced to let it lie as it is, and turn to the next subject.

SIR WALTER SCOTT said, "the death-bed scene of poor old Jack Falstaff is the most pathetic and pitiful death-scene ever written." The bishop of Winchester died from poison, Humphrey of Gloster was strangled, and George, Duke of Clarence, was first hit upon the head and then drowned in a butt of malmsey. I will read you portions of these three death scenes and turn to the next, the Aspic's Trail and bite, the death by drowning, Caesar's falling sickness, Henry the Fourth's stroke of apoplexy, the death of Katherine, the accouchment of Ann Boleyn, the descriptions of wounds, examination of urine, the divisions of ague into tertian and quotidian, the descriptions of fevers, gout, syphilis, senility, blindness, hunger, use of plaster, bleeding, the exhibition of aconite, hemlock, rue, parmecita, sulphur, mercury, iron and a host of other medical terms, descriptions and thoughts can only be mentioned, as the time is too limited to enter into their complete reading, for I wish to open up a comparatively new question —the circulation of the blood as found in the plays. With it I shall have to give you a little anatomical knowledge from the plays, for the author must have either dissected the human body or at least seen it done, and that he was perfectly familiar with the experiments and proofs of the circulation I think I can show to the satisfaction of all my hearers. For we find it scattered through all the thirty-six plays contained in this volume, and in so plain and elaborate a manner that I cannot believe but that I can show you he was either the original discoverer of the great anatomical and physiological truth or knew intimately the experiments and dissections upon which it is based. Here I make an extraordinary statement which is, if WILLIAM SHAKESPEARE wrote the plays bearing his name, he discovered the circulation instead of DR. WILLIAM HARVEY. And further, if SHAKESPEARE did write the plays, HARVEY stole the discovery from SHAKESPEARE. One of these statements must be correct if it is allowed for an instant that WILLIAM SHAKESPEARE wrote the plays, and I will now proceed to prove my statement, and I must commence it or preface it with a short epitome of both HARVEY and SHAKESPEARE.

DR. WILLIAM HARVEY took his literary degree at Caius college, Cambridge, and his medical degree at the great school of medicine at Padua. He returned to London and was, in the year 1615, appointed Lumlian professor at Bartholomew hospital. In the year 1616, about the latter part, he made his first discovery of the circulation, but did not make it public until the year 1619, when he published his first little monograph upon the subject, but it was not until the year 1628 that he became fully sure the world was ready for the announcement. In that year he published the work which makes him famous at the present day.

MASTER WILLIAM SHAKESPEARE finished writing, so his biographers tell us, in the year 1612, and although the works bearing his name were not published until 1623, and although they were double in amount, all of them having been re-written, still, the gentlemen referred to, say he did nothing after 1612. Master William, having finished his work, thought it best to depart from this vale of tears, and did so in April, 1616. Notice the last of his writing, done in 1612, and his death occurring in the April before HARVEY makes his discovery.

If there is one word in the plays of the circulation, then there is a great discrepancy between SHAKESPEARE and HARVEY. For if HARVEY did make it SHAKESPEARE must have risen from his grave to write it in the 1623 edition. If, on the other hand, SHAKESPEARE wrote it before his death, then HARVEY must have stolen it. The first thought that arises is, get the early editions of the plays and see if it was in them. But here steps in a difficulty which we cannot overcome, namely, six of the plays never appear except in the 1623 edition, and all the others are completely rewritten and enlarged to about double their original size. For instance, Richard Third's whole opening speech, commencing "Now is the winter of our discontent made glorious summer by this son of York" is not found in any of the early editions of the plays. So of them all, they are so changed from the first printed copies that there is no use in citing them in any way, so that we are forced to abide by the 1623 edition and no other.

This being the case, and as the 1623 is the only edition having all the so-called SHAKESPEARE plays, we will use that as the basis of comparison. If my hearers will, when they go home, take their *fac similie* of the 1623 and turn to Coriolanus, page 2, they may read the first of the quotations I shall make:

"Your most grave belly was deliberate,
Not rash like his accusers and thus answered:
True is it, my incorporate friend, quoth he,
That I receive the general food at first
Which do you live upon: and fit it is;
Because I am the store-house and the shop
Of the whole body: but if you do remember,
I send it through the rivers of your blood,
Even to the court the heart—to th' seat o' th' braine;
And, through the cranks and offices of man,
The strongest nerves, and small inferiour veines,
From me receive that natural competencie
Whereby they live: and though that all at once,
You, my good friends (this says the belly) mark me,

Now please turn to Romeo and Juliette, page 53, and read:

With purple fountains issuing from your veins.

Then the same, page 71:

Take thou this, viole being then in bed,
And this distilling liquor drink thou of,
When presently through all thy veins shall run
A cold and drowsy humor, for no pulse
Shall keep his native progress but surcease;
No warmth nor breath shall testify thou livest;
The roses in thy lips and cheeks shall fade.

Next turn to Love's Labour Lost, page 135:

Why, universal plodding poisons up
The nimble spirits in the arteries:
As motion, and long during action, tires
The sinewy vigor of the traveller.

Now drop down the same column and read:

Lives not alone emured in the brain;
But with the motion of all elements,

Courses as swift as thought in every power;
And gives to every power a double power,
Above their functions and their offices.
It adds a precious seeing to the eye;

Turn to the same play, page 134, and read:

When a hand, a foot, a face, an eye, a gait, a state, a brow, a breast a
[waist, a leg, a limb.

Now Twelfth Night, page 255:

Liver, brain and heart,
These sovereign thrones are all supplied and filled.

The same, page 266:

If he were opened and you find so much blood in his liver
As will clog the foot of a flea, I will eat th' rest of th' anatomy.

Now turn to Henry the Sixth, part II, page 134:

See how the blood is settled in his face
Oft have I seene a timely-parted ghost
Of ashy semblance, meagre, pale, and bloodless
Being all decended to the labouring heart
Who in the conflict that it holds with death
Attracts the same for aydance 'gainst the enemy.
Which with the heart there cools and ne're returneth
To blush and beautifie the cheeke againe.
But see his face is blacke and full of blood,
His eyeballs further out than when he lived,
Staring full gastly like a strangled man;
His hayre up rear'd, his nostrils stretched with struggling;
His hands abroad display'd as one that graspt,
And tugged for life.

Now read Henry the Fourth, part II, page 92:

The vitall commoners and inland pettie spirits
Muster me all to their capitaine, the heart, who great
And puft up with his retinue, doth any deed of courage.

Winter's Tale, page 302, reads:

Let be, let be would I were dead but that methinks alreadie
[What was he that did make it] see [my Lord] would you not deeme
It breathed and that those veines
Did verily beare blood?
Masterly done.
The very life seems warm upon her lippe;
The fixture of her eye has motion in it, as we
Are mock'd with art.

Merchant of Venice, page 179, reads:

A messenger with letters from the doctor, new come from Padua.

And just below it read:

My flesh, blood, bones and all
Ere thou shalt lose for me one drop of blood.

As You Like It, page 204, William, Sir;
And Henry the Fourth, part first, page 50:

Falstaff, Harvey Rossil.

Merry Wives of Windsor, page 42:

Master Doctor Caius.

Love's Labour Lost, page 122:

The which I hope well is not enrolled there.

Much Ado About Nothing, page 121, reads:

A college of witcrackers.

Page 144:

Ile change my blacke gowne.
You shall this twelve months terme from day to day
Visite the speechlesse sicke and still converse
With groaning wretches with all the fierce endeavour of your wit
To enforce the pained impotent to smile;
To move wild laughter in the throate of death
A twelve month well befall what will befall
Ile jest a twelve month in an hospitall.

Now, Henry the Fourth, part II, page 84:

Little Tydie Bartholomew.

Midsomers Night's Dreame, page 151:

If I cut my finger I shall make bold with you.

All's Well That Ends Well, page 235:

When our most learned doctors leave us and
The congregated college have concluded
That labouring art can never ransome nature
From her inaydible estate.

The same, page 238:

Strange it is that our bloods
Of colour, waight, and heat pour'd all together would quite confound
[destinction.

Winter's Tale, page 278:

I have tremor cordis on me, my heart daunces
But not for joy, not joy.

King John, page 11:

Had bak'd thy blood and made it thicke and heavy
Which else runs tickling up and downe the veines.

As You Like It, page 193:

> My lungs began to crow like chanticleere
> The same
> That in civility thou seemst so emptie
> You touched my veines at first the thorny point.

Richard the Second, page 27:

> But lanceth not the sore.

Henry the Fifth, page 73:

> Some say knives have edges.

Henry the Fourth, second part, page 85;

> And changes fill the cup of alteration with divers liquor.

If my hearers will now read these quotations all together I think they will be obliged to admit that the author of the plays had a very good knowledge of the great discovery. See how the words meet and join, arteries, veins, inferior veins, spirits run through the veins pulse surcease mocked with art. Purple distilling liquor lanceth blush and beautifie the cheek nimble spirits through the arteries, et cetera. Is this chance? If it were in one place it might be, but as it recurs again and again it must have been put there for some purpose and as the author was in his grave, that is if SHAKESPEARE was the author of the plays, HARVEY must have stolen the great discovery. But as a member of the medical profession I will not admit that our great brother of the seventeenth century was indebted to a man who, we are told by the best of his biographers, never went to school in his life. And I am sure that no one within sound of my voice to-night but will uphold me in the following statement, that no ignorant man could by any possibility have made the necessary experiments for the finding out of this wonderful discovery. Further, how could a man not a member of a hospital or college have had the chance to make the experiments necessary to prove his theory? He could not have gained admittance to the dissecting room unless he become a student, for in those days the student of medicine was compelled to take a long course of preliminary training before he was allowed to practice upon the public. If you will now permit me to place these quotations together I think I can amuse you for a moment; see if it will not read about as follows:

"I have oft seene DR. WILLIAM HARVEY, the new doctor at Bartholemew hospital, in the presence of the learned doctors, force a purple, distilling liquor through the veines of a dead body, and, after it had descended to the heart, liver, and lungs, the blood-coulored liquor returneth againe to the face which blacke and full of blood, or pale, meagre, and bloodless before, doth blush and beautifie, as if with life; you would think the body breathed; the very lippe is warme to look upon; but we are mock'd with art as there is no pulse gainst the finger and though the arteries seeme full yet no life is present. The legs, waist, arms, hand, brow, and limes seem alive, but we can never ransome nature. The Doctor was enrolled at Caius college."

And now, in conclusion, I will be very glad to answer any questions that the members of the society wish to ask me, and will be glad to have them examine the *fac simile* of the 1623 edition of the plays that I have with me; you can understand that I cannot in this lecture read all the quotations to be found in the play regarding medicine, but I am in hopes that I have given you something new, and for the most part never before given to the world, and thanking you for your kind attention, I will, like the epilogue to an old play, make my bow and exit.

GASTROTOMY.*

By H. C. GUILLOT, M. D., Pontiac, Michigan.

The subject which I have chosen for this evening is one which, on account of its individuality, is extremely interesting, the comparative infrequency of operations of this character making the case which I shall present, worthy of your careful consideration. During the past two years the literature on the subject of gastrotomy has increased to such an extent that cases too numerous to mention have been reported, many of the operations having been performed for the removal of foreign substances from the stomach, others for cancerous growths of the pylorus, but very few for stab wounds where there has been great laceration of the stomach walls, with perforation. It is to the last variety that I wish to call your attention, and incidently refer to the influence which old adhesions of the omentum to the abdominal parietes, exert over a mind already impaired, causing the development of visceral illusions, which in this case resulted in the patient attempting to disembowel himself, for no less reason than that he believed that another being inhabited his person and was anxious to be set free.

The patient, a man aged forty-one, who has resided in the asylum since May, 1889, is suffering from a form of disease known as dementia monomania. At the time of his admission he was under the influence of delusions of a persecutory type. Visual and auditory hallucinations were also present and, at times, were the cause of much uneasiness and mental distress. He had never exhibited any violent or suicidal tendencies and was, everything considered, quite trustworthy and a typical case of chronic insanity. He was industrious and had been working in the kitchen for more than a year prior to the time that he injured himself. His work consisted of peeling potatoes and preparing other vegetables for cooking. On the morning of July 23, 1891, he went to the kitchen immediately after breakfast and prepared to work, as he had been in the habit of doing. After having peeled potatoes for some time his knife became blunted, and he sharpened it on the window sill, after which he went to the water-closet, carrying the knife with him. Not returning immediately, the kitchen boy who had been placed in charge of patients while they were at work, went to investigate, and learn if possible the cause of so much delay. Upon opening the door of the closet he saw the patient standing opposite the urinal, and noticed that he was making a peculiar sawing motion with both hands. Immediate investigation revealed the fact that patient was trying to disembowel himself, using a case knife for the purpose. Word was immediately sent to the medical office, notifying the physicians of what had occurred. Upon reaching his side we discovered that he had opened his abdomen, the incision about six inches in length, extending transversely across the abdomen at a point about two inches below the ensiform cartilage, a large amount of omentum and bowel protruding and bleeding profusely.

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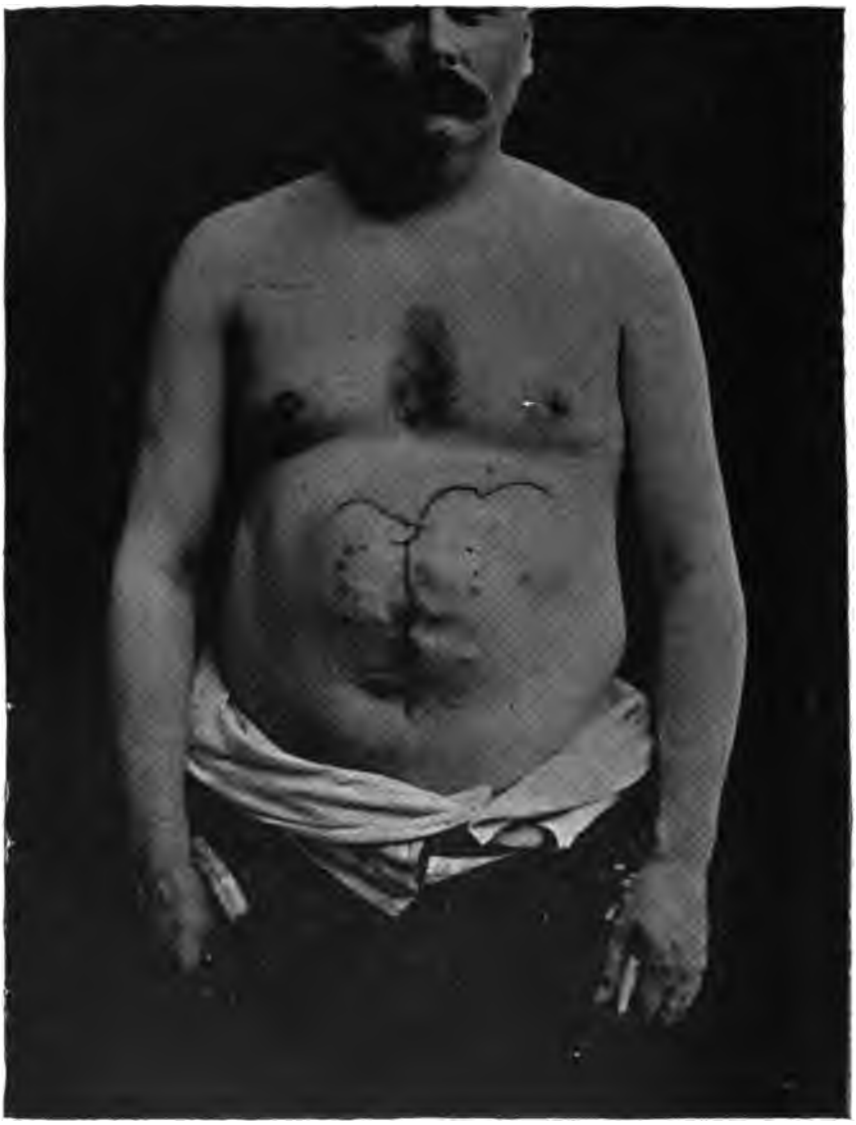
*Read at a stated meeting of the Pontiac Medical Society, and published exclusively in The Physician and Surgeon.

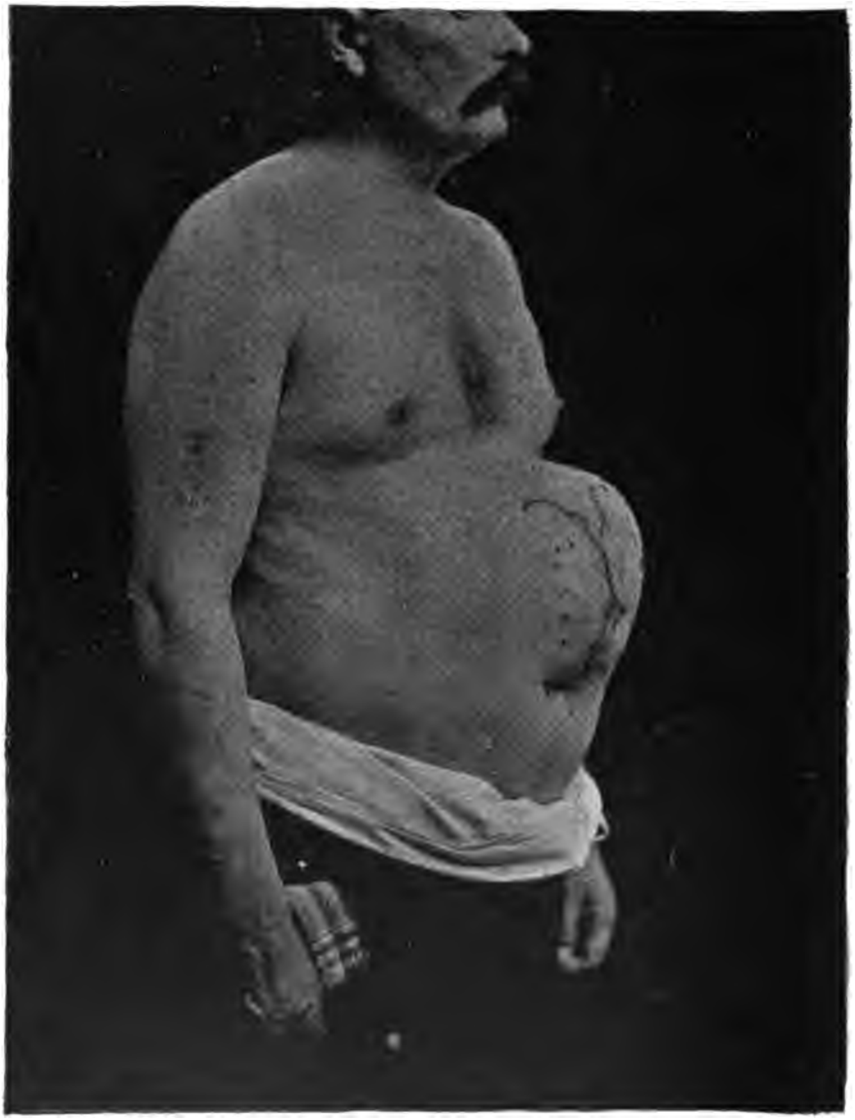
He was carried to the hospital, where an anesthetic (chloroform) was administered by Dr. Morse. After the hemorrhage from the omentum had been controlled by securing and ligating several blood-vessels, it was found necessary to enlarge the opening for the purpose of making a more thorough examination of the contents of the abdominal cavity. I then made an incision in the median line downwards to, and a little to the left of, the umbilicus, which revealed a condition



Front View—Showing Cicatrix.

often suspected in cases of insanity where visceral illusions are present, but where the opportunity of corroborating one's suspicions is usually wanting, namely, a portion of the omentum firmly adherent to the inner surface of the abdominal walls. While examining the intestines for any perforations, a small quantity of but partially digested meat and potato escaped into the cavity. Upon investigating the source of this I discovered an opening in the walls of the stomach large enough to permit of the passage of two fingers into the cavity, also a laceration about four inches in length, extending diagonally across the anterior surface of the organ, involving both the serous and muscular coats. It was through this opening that the articles of which his breakfast had consisted escaped. The laceration and opening were closed by using a sterilized Chinese silk suture—a modification of the Lembert suture being used. This consisted of taking the stitches in the same manner as a Lembert, but making them continuous, in preference to the interrupted method. By doing this close apposition, with inversion of the edges of the serous surfaces, was secured. A careful inspection of the whole alimentary tract was made, but no other openings were found. The cavity was then irrigated with a hot solution of boracic acid, two per cent., about two gallons being used. The recti muscles, where he had lacerated them with the case-knife, retracted in their sheaths to such an extent, and had been severed so close to the lower border of the ribs, that to have secured and sutured them would have prolonged the operation beyond a point which seemed at the time safe. The wounds were closed by means of deep and superficial sutures, a drainage tube being placed in the transverse incision. Antiseptic dressings were applied, and the patient was placed in bed, being restrained to prevent his moving about should he become restless. Throughout the operation I was assisted by the other members of the asylum medical staff.

The same afternoon his temperature was taken and read as follows: At 3 o'clock in the afternoon, 100¾° Fahrenheit; 4 o'clock in the afternoon, 101 1-5° Fahrenheit; 5 o'clock in the afternoon, 101° Fahrenheit, with respiration slightly accelerated and pulse rate 120 per minute. The first night he vomited slightly, no blood being present in the ejecta. Nothing of a liquid character was permitted to pass his lips until the afternoon of the 24th—being just one day after the operation; and then water in teaspoonful doses was administered every hour. The drainage tube was removed on the second day following the operation, the wound presenting a perfectly healthy appearance. On the third day it was noted in case book that he had rested well since the operation, had not complained of pain, but requested to be allowed a more liberal supply of water. Nourishment was then ordered, in the form of beef meal, one teaspoonful to a tumblerful of milk, given in tablespoonful doses every half hour, and the quantity of water increased to a tablespoonful every thirty minutes. His bowels not having acted since the operation, an enema was given, with good results. His temperature was then 99° Fahrenheit, and pulse 72. From this time up to August 1 — just seven days following the operation — he was comfortable; temperature had not registered above 100° since the first day, and pulse was then 72 per minute and temperature normal. There was a discharge from the wound of a grumous fluid mixed with oil globules and a small amount of necrosed adipose, the subcutaneous fat being over one inch in depth in the neighborhood of the wound. August 5 the sutures were removed, and edges appeared to have united firmly. From this time on he improved rapidly, and was allowed to sit up and go about the hall one month after the operation. A body bandage about eight inches wide was worn for several weeks, until the walls seemed firm and strong. After the bandage had been dispensed with the presence of a hernia, at first quite small, beginning at the point where the recti muscles were severed, was noticed. This hernia has slowly but steadily increased until, as you see him to-night, almost the entire stomach is included in the prolapse. After he has partaken of a meal the organ can be mapped out quite easily. His appetite is excellent and he suffers but little inconvenience from the hernia. At present he wears an abdominal bandage. He goes out of doors



Side View—Showing protrusion of abdomen nineteen months following operation.

quite regularly and is able to take the usual walk of about one and one-half miles twice a day without being fatigued.

That the act of self-mutilation was not a deliberate attempt at suicide, but the logical outcome of his illusions, which were founded upon the drawing sensations experieneed in his abdomen as a result of the adhesions present, I feel firmly convinced. He had undoubtedly reasoned that if his body were inhabited by another being, that that being should be set free and himself relieved of an uncongenial companion. Cases occasionally occur in asylum practice in which patients who, as a result of adhesions following peritonitis or pleurisy, develop the illusion that some object inhabits their body. Two cases of this nature, for an account of which I am indebted to Dr. E. A. Christian, will serve to show what such pathological states have to do with the mental condition of patients.

The first case was that of a man admitted in August, 1878. At that time he believed that a mouse was located in the right side of his abdomen, and repeatedly struck himself severe blows in the hope that he would get rid of his unwelcome visitor. This illusion lasted until his death, which occurred as a result of tubercular peritonitis, four years following his admission. The post-mortem examination revealed the presence of both acute and long-standing tubercular disease of the peritoneum. The peritoneum was thickened and the bowels matted together, the adhesions being so firm as to prevent separating the coils of intestines without lacerating the walls. Everywhere upon the bowels and peritoneum were small tubercular masses of a grayish white color, varying in size from a head of a pin to twice that size. What had once been the great omentum was then but a fleshy mass of about one and one-half inches in width and one-quarter of an inch thick. It was as firm as muscular tissue, and extended diagonally across from the greater curvature of the stomach to a point opposite the anterior superior spine of the ilium, where it was firmly united to the peritoneum lining the abdominal cavity. This condition unquestionably gave rise, from the irritation which it set up, to the illusion regarding a mouse which he had at the time of his admission.

The second case, that of a man who was admitted in September, 1878. At that time he believed that his brother, sister-in-law, and a priest were in his abdomen. This illusion remained until death, which occurred in August, 1885. He experienced a severe chill, accompanied by slight distension of abdomen, dying within forty-eight hours. At the post-mortem held six hours after death, there were found no pathological conditions to account for death. The bloating of the abdomen was due largely to a constriction of the lower part of the descending colon, which would not permit of the passage of the little finger. This condition is believed to have been due to an old colitis. The illusion in reference to his brother, sister-in-law and priest being in his belly can be accounted for by the pain and peculiar sensations which he would experience every time that gas or fecal matter passed through the constricted portion of the colon.

It is reasonable to presume that the patient before you to-night has experienced sensations in his abdomen as the result of adhesions of the omentum, discovered during the operation, which he has attributed to the presence of another being,—he having on several occasions stated that he did it to "let the fellow out." At present he excuses his conduct by saying that his brain must have been wrong at the time, or he would not have committed the deed.

THE COOL BATH TREATMENT OF TYPHOID FEVER.*

By COLLINS H. JOHNSTON, A. M., M. D.,

VISITING PHYSICIAN TO SAINT MARK'S HOSPITAL, GRAND RAPIDS, MICHIGAN.

MANY statistics have been collected showing the mortality of typhoid fever under various methods of treatment. But all writers with whom I am acquainted freely admit that the cool bath treatment introduced to the profession by DR. ERNEST BRANDT, of Stettin, thirty or forty years ago, gives unquestionably the lowest mortality rate. Becoming convinced of the usefulness of this treatment, I began using it in both hospital and private practice two years ago, since which time all of my hospital cases, and almost all of my private cases of typhoid fever, have been subjected to the cool bath treatment. During the past six months it has been the routine treatment for all cases of typhoid fever at Saint Mark's hospital, with but very few exceptions.

For various reasons this method of treating typhoid has not met with much favor in America until recently. One reason for this has been that American textbooks on the "Practice of Medicine" have either entirely condemned it, or damned it with faint praise. Even as recent a writer as OSLER, in his work on "Principles and Practice of Medicine" published last year, after stating that the BRANDT treatment is rigidly carried out in his service in Johns Hopkins hospital, says: "This rigid method is not, however, without serious drawbacks, and personally, I sympathize with those who designate it as entirely barbarous. To transfer a patient from a warm bed to a tub at 70° Fahrenheit, and to keep him there twenty minutes or longer in spite of his piteous entreaties, *does* seem like harsh treatment; a majority of our patients complain bitterly, and in private practice it is scarcely feasible."

Recent utterances, however, of some of our leading writers show a gradual change of feeling on the part of American physicians in regard to this most useful treatment. DR. WILLIAM PEPPER, who failed to describe the method and its splendid results in his "System of Medicine," admits his "own progressive conversion to belief in the treatment, and the desirability of its use in the vast majority of cases of typhoid as a routine treatment." ALFRED L. LOOMIS, who was formerly opposed to the BRANDT treatment, taught its value to his students in his last course of lectures, and H. A. HARE, in his recent work on "Therapeutics," says: "The BRANDT treatment should be practiced whenever it is possible to do so, as by it is gained a mortality one hundred and fifty per cent. less than by any other known method."

Another reason, I think, why this treatment of typhoid fever has not become more rapidly popular, is, that the descriptions of the method, even when published by its friends, have so often been inaccurate. For instance, HARE, in his "Practical Therapeutics," page 587, says: "The method consists in immersing the patient every three hours in a bath at the temperature of 85° Fahrenheit, or as low as 75° Fahrenheit, if necessary, and allowing him to remain in the water until the temperature fall to 100½°, or 101°, the bath being used with the frequency named as long as the temperature is above 102°." BRANDT, however, immerses his patients in water of 65° Fahrenheit, and allows them to remain, as a rule, fifteen minutes, *never* longer than twenty minutes. DR. FRED P. HENRY, of Philadelphia, the latest writer on the subject, in HARE's "System of Practical Therapeutics," says: "The method consists in giving baths at 64½° to 68° Fahrenheit, every three hours, when the rectal temperature exceeds 101.3°;" while BRANDT, himself, tells us to repeat the baths when the rectal temperature exceeds 102° Fahrenheit.

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* Read by title before the MICHIGAN STATE MEDICAL SOCIETY, May 12, 1893, and published exclusively in The Physician and Surgeon.

DR. OSLER, who claims to follow the BRANDT treatment rigidly, says: "Every third hour, if the temperature is above 102½° Fahrenheit, the patient is placed in a bath at 70°." BRANDT says on this point: "The temperature of his baths varies with a number of circumstances, among which the most important are the intensity of the fever, and the resistance it offers to the cooling process. There are, however, limits which should not be transgressed, 15° to 20° centigrade or 60° to 70° Fahrenheit."

Such inaccurate teaching as the above, if followed, cannot fail to bring the BRANDT treatment into disrepute, as the careless or inaccurate carrying out of its details will not be productive of the desired results.

The method of BRANDT, simply, is as follows:

When the temperature taken in the rectum exceeds 102° Fahrenheit the patient is completely submerged, with the exception of his head, in a bath of 65° Fahrenheit, with a compress with water of 60° Fahrenheit upon his head. He remains in the bath fifteen minutes, occasionally twenty minutes, during which time he is systematically rubbed by the attendants. He then steps out of the bath, or, if too weak, is lifted out, and is wrapped in a coarse linen sheet, over which a blanket is folded, the extremities being thoroughly dried and rubbed. A little brandy or wine may be given, if necessary, to assist reaction. This procedure is repeated every three hours, occasionally every two and one-half hours, day and night, unless the temperature remains at or below 102° Fahrenheit. All temperatures should be taken in the rectum, between the temperature of which and the mouth I have seen a difference of five degrees. If there is much perspiration the patient should be dried before entering the bath. In the middle of the bath a glass of cold water should be given him. Three quarters of an hour after the bath the temperature should be again taken, as at this time it is usually the lowest, and the effect of the bath can be correctly estimated. Neither age, sex, menstruation, pregnancy or sweating offer contra-indications to this method of treating typhoid fever. When the temperature before the bath is very high, or when the fall forty-five minutes afterwards is less than 2°, the normal amount of reduction to be expected, the temperature of the water may be lowered to 60°, and the duration extended to eighteen or twenty minutes. When the case has so far progressed towards recovery that the temperature does not exceed 102°, but yet exceeds 101½°, baths of 70° of five to ten minutes' duration should be given to insure the patient good rest, to prevent the prolongation of the fever and the occurrence of relapses, and to shorten convalescence.

The teachings of many of our writers on typhoid fever is misleading in conveying the idea that the reduction of temperature is the main object of the treatment. Such, however, is not the case. BRANDT himself most emphatically disclaims any such idea; reduction of temperature is a secondary object. High temperature is not in itself the chief determining cause of fatality in typhoid fever. Minus infection, it does not produce those serious degenerations in the heart and other organs formerly ascribed to it. Heart failure and degeneration are now known to be due to the infective process, and a ptomaine intoxication resulting from it, and it is combatting these effects of the toxic agencies that the cold bath treatment yields its most triumphant results. Not only is the heat of the body dissipated by the bath, but heat-*production* is decreased, acting in this way like antipyrin, acetanilid, etc. Moreover, the nerve centers which preside over circulation, respiration, digestion, excretion and tissue formation are toned up and energized, so that they are enabled to tide over the dangers which would ensue from failure of these functions. The heart is made to beat more vigorously, and the pulse becomes slowed and more regular. Appetite and digestion are uniformly improved; respiration is slowed and deepened; nervous symptoms, such as headache, stupor, and delirium, are dispelled.

One very marked effect of the baths is to prevent or moderate the severe abdominal symptoms we are so accustomed to see in a severe case of typhoid. BRANDT claims that a rigid adherence to his method will prevent ulceration and perforations. One prime condition, however, is that the case come under treatment before the fifth day. He says that during the first five days the pathological changes in the intestines are confined to the stage of infiltration, and he furnishes the results of one autopsy in proof of this assertion.

* BRANDT's last statistics are really remarkable. He tabulates two thousand one hundred and twenty-three cases treated according to his method by himself and a few other clinicians. Only twelve deaths occurred—a mortality of one per cent. All of the fatal cases were of individuals who did not come under treatment until after the fifth day of the disease. He claims as a result of thirty years' experience that every case of typhoid fever will recover in which his method of treatment is commenced before the fifth day.

These remarkable results are explained by the fact that the baths have not only an antipyretic influence on the circulation, but they furnish the necessary conditions for the diseased structures to protect themselves, so that the pathological processes stay within certain changeless limits. Pathological anatomy teaches us that the formation of an ulcer is not *necessary* in a case of typhoid. In the milder cases the affection of the glands may proceed only as far as the stage of infiltration and then go back without having proceeded to the stage of ulceration. To this class of cases the typhoid treated with water from the beginning, five days. The bathing process makes a mild case out of what would otherwise be a severe one. Hence, the necessity for the early commencement of the treatment. The best effect of the baths, therefore, is seen upon cases coming under treatment before the fifth day. It may be said, however, that we rarely see cases of typhoid fever before the fifth day, or that we are usually unable to make a positive diagnosis by that time. But all cases of high temperature from whatsoever cause, are benefitted by cool baths, and should be so treated when possible. If the case turn out to be other than typhoid, so much the better. The antithermic effect of the bath is as beneficial in pneumonia, pleurisy, any of the acute exanthemata, or any other febrile disease, as in typhoid fever. The results of the treatment are also marked in cases coming under treatment later in the disease, although their influence is not shown until a number of baths have been administered. This benign influence is probably not exhibited for a number of days.

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* "PEPPER's American Text-Book of the Theory and Practice of Medicine," Volume I, page 120.

When beginning the treatment of typhoid two years ago with baths I made use of the Ziemssen or gradually cooled bath in several cases, but it was found unsatisfactory for several reasons, and soon abandoned, except at the beginning of a case, when I now frequently use it a few times to acccustom a patient to the hydriatic treatment. The reduction of temperature is not so marked with the gradually cooled bath as with that of Brandt, and the revivifying effect is comparatively slight. The amount of labor entailed upon the attendants in carrying water to and fro is great, and patients object strongly to the length of time, from twenty to thirty minutes, necessary to obtain the desired effect. The only modification of the Brandt bath I now resort to is the so-called Riess bath, a prolonged warm bath used by Dr. L. Riess, of Berlin, in over one thousand cases of typhoid fever with most brilliant results. It consists of immersing the patient in a bath of 88° Fahrenheit, prepared with a hammock to afford comfortable support. This is done whenever the rectal temperature reaches 102° Fahrenheit. The patient is allowed to remain in the bath usually during the day only, but if necessary, day and night, until his rectal temperature registers 100° Fahrenheit. He is then removed, and replaced in the bath when his temperature again reaches 102°.

While the results of these prolonged warm baths are by no means as good as those of the Brandt baths, it is wise, I think, to substitute them for the latter in two conditions. First, when cerebral disturbances remain excessive; second, after late intestinal hemorrhages. Upon cerebral disturbances the Riess baths often act more favorably than the cool baths. Brandt distinguishes two kinds of hemorrhages in typhoid fever: an early or false, and a later or true hemorrhage. The early hemorrhages, which are capillary, do not require cessation of the baths, as they no doubt exert a favorable influence upon the intestinal hyperemia upon which the hemorrhage depends. It has been shown experimentally that the cool bath produces not an increased redness, but a pallor of the intestinal mucous membrane, and it is well known that hydriatic treatment diminishes the frequency of intestinal hemorrhages. But we will all agree that absolute rest is demanded after a true hemorrhage, due to the formation of sloughs and the erosion of arterial vessels. It is in this emergency that I think the prolonged warm bath of Riess is of great value, forming a useful supplement to the treatment of Brandt, as it enables us to keep down the temperature of the patient without subjecting him to the movements necessarily connected with cool bathing.

I wish to insist, in closing, upon strict adherence to Brandt's rules if we wish to attain his wonderful results. Much of the so-called Brandt treatment is such in name only. *"It is to the minute attention to every detail of asepsis and antisepsis that modern wound treatment owes its triumphs. So it is with the cool bath treatment of typhoid fever. If the temperature of the bath is not correct, or its duration is changed, or frictions are omitted, it is no longer a Brandt bath, and we do an injustice to the great devisor of the method if we claim that we have used it, and our results do not correspond with his."

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*Editorial *Journal of Balneology*, August, 1892.

FOREIGN BODIES PENETRATING THE EYE.*

By D. MILTON GREEN, M. D., Grand Rapids, Michigan.
OPHTHALMIC AND AURAL SURGEON TO SAINT MARK'S AND U. B. A. HOSPITALS; EYE, EAR AND THROAT SURGEON TO HOLLAND HOME FOR THE AGED; LECTURER TO SAINT MARK'S AND U. B. A. TRAINING SCHOOL FOR NURSES, ETC.

I selected this subject, not because I had any new discoveries to disclose, any new operation to propose, or new theories to advance, but because my experience, observation, and reading of the limited literature on the subject, have led me to believe that among the great majority of physicians these cases are not properly treated, and that the fault lies in the fact that many are too busy, while the lack of instruments and other conveniences, lack of courage and lack of experience in making examinations of the eyes enter as factors in many instances, and some, I am led to believe, lack a knowledge of just the technique of the examination necessary to arrive at the most correct conclusions, —but the worst of all is a lack of interest, of which I am sure but few physicians are guilty. Another reason for the selection, is the deep interest I have in the subject, and the hope from the discussion of the paper by the eminent gentlemen present, we may be able to glean much useful knowledge and be better able to conserve the sight and eyes of our patients.

The subject of foreign bodies in the eye is broad and extremely varied, so much so indeed, that it is beyond the limits of this paper to discuss, and while this be true, it is nevertheless as interesting and important as it is extensive and varied. The kinds of foreign bodies penetrating the eye with which we have to deal most frequently, are fragments of steel or other metals, and pieces of glass, also splinters of wood, parts of shells of percussion caps, blades of knives or scissors, and fork-tines. There are, indeed, innumerable forms of foreign bodies that may penetrate the eye, and of various shapes and sizes, and they may enter the eye from *different* directions, penetrating to *various* depths, therefore, *each case is a special study in itself.*

The object of my paper is to present a certain class of injuries, and not all forms of foreign bodies in the eye, and to enter a plea for true conservatism in their treatment, as against the careless, slipshod method of examining and prescribing, while the foreign body is allowed to remain until it has destroyed the eye, and perhaps its fellow, or has, at least, become so intensely inflamed that the only alternative is enucleation, thereby entailing great physical deformity and damage, as well as irreparable injury from a cosmetic point of view. The forms to which I refer and to which I shall confine my remarks are *foreign bodies penetrating the eye, and whether immediately withdrawn, or still remain lodged within that organ.*

Whenever a foreign body penetrates the eye it is of serious moment, as it may wound the lens, causing it to swell and become itself a foreign body, or by wounding the ciliary body and introducing microbes it may create a serious inflammation and entail loss of vision or of the eye itself, *but when a foreign body is lodged* in the interior of the eye it converts the injury into a most serious lesion, notwithstanding the fact that from external appearances it may seem but trivial; for it entails the destruction of the eye more or less complete, in the majority of instances, therefore, we must, in every injury of the eye, attended with perforation, propound the query whether or not a foreign body remains within it. I grant you that it is not always easy to determine when a foreign body remains lodged in the eye, and for that reason it is important that we proceed with the examination methodically and understandingly.

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*Read before the Surgical Section of the Michigan State Medical Society at Muskegon, May 16, and published exclusively in The Physician and Surgeon.

First.—The history of the case will materially assist in forming a conclusion. For instance, if the eye has been wounded by a knife-blade, blade of scissors, fork-tine or other similar instrument, we would naturally conclude that no foreign body remained; conversely, if a person had been pounding iron or steel, or firing a gun and received a perforating injury of the eye, we could fairly suppose that a foreign body remained therein. This being the case, we should search for the wound very carefully, for wounds made by small, thin bodies are sometimes difficult to detect, so much so as frequently to require the careful scrutiny of the most experienced observer to discover them. Corneal wounds close and heal very quickly, and if a day or two have elapsed since the injury, quite large wounds will have healed, and look as though they might have been caused by contusion.

Second.—Bifocal illumination should be the next step in the examination, by which we may discover the foreign body lodged in the anterior chamber, upon or imbedded in the iris, or on the surface of the lens. Failing to detect the foreign body, the ophthalmoscope next comes in play, and if the view is not obstructed by blood in the aqueous chamber or opacity of the lens we may be able to locate the offender. If we have yet failed, palpation may locate the body by finding a very tender spot, and we may thus be able to conclude that a foreign body remains in the eye.

If we have located a foreign body in the eye, the next consideration is, What shall we do? that is, What is the most conservative plan of treatment? Shall we attempt to remove the foreign body, or enucleate the eye? I shall not weary you with the technique of the various methods of removing foreign bodies, for that would be an endless task and serve no good purpose here, but it seems to me we are here confronted with the following problems:

(1) Can we save the sight of the injured eye?

(2) Should we attempt to save the eyeball in a sightly condition for cosmetic effect, with but little or no chance of useful vision?

(3) To save the sight of the injured eye, must we enucleate the offending member?

The answers, I grant you, do not figure out like mathematical problems, but each case will be the subject of serious consideration.

If the foreign body has been withdrawn the eye should be put at rest after careful cleansing. Atropine should be used in some cases, especially where synechiæ are not desired to close a wounded lens capsule, but no fixed rule can be applied to the use of atropia.

If the iris protrudes, cut it off and by closing the lids encourage healing of the wound. Later, if the lens becomes swollen, producing extreme tension, remove it as you would do a cataract operation, and you will often be able to save a useful eye, especially if the operation is done before there is much inflammation and the lens matter is carefully washed out.

If the lens is badly fractured or lacerated, it should be removed at once. Do not do too much, and above all do not be too ready to enucleate the eye.

If a foreign body remains in the eye and *can be located*, its removal should be attempted, and effort made to save the eyeball, even though useful vision cannot be maintained, for a partially deformed eye is more sightly than the average artificial eye, and usually less troublesome and expensive.

If the foreign body cannot be removed, the eye should be enucleated before it has become much inflamed, as there is nothing to be gained by delay, and much damage may result.

The points I have tried to make, may be best illustrated by the following cases, which I wish to briefly report, and will then leave the subject for you to discuss.

Case I.—Peter D., aged eighteen, Pewamo, Michigan. Kindly referred to me by Dr. Droste.

History.—"Was shooting out the old year" when something struck him in the eye. Did not pain him much. Saw no physician at the time. Had no pain in eye but it was blind the next morning after the injury. Two weeks later the eye began to get red but had never been painful. He consulted Dr. Droste who referred him to me.

Examination.—Cannot count fingers but sees light. A V-shaped scar was visible in the margin of the cornea, and a hole in the iris nearly round and about one and one-half millimeters in diameter. Lens was opaque and swollen, pressing the iris forward. Remains of hemorrhage could be seen in the aqueous chamber, so changed as to look like hypopyon. On ophthalmoscopic examination I could not see the fundus, but through the partially opaque lens could see an object back of the lens, which moved in the opposite direction from the movements of the eye.

I diagnosticated a fragment of gun-cap in the vitreous humor back of the rotary centre of the eye. To try and save the eyeball for cosmetic effect, I made an incision as for cataract extraction and an iridectomy including the hole in the iris, and removed the lens; then with curved iris forceps I grasped the half of a gun-cap, and carefully removed it from the vitreus, together with some opaque vitreous humor. The eye healed kindly and he recovered with a good looking eyeball and fair vision. Should he lose the other eye he could be given useful vision in the injured one by the use of a strong convex lens, to take the place of the natural refractive medium which was removed.

Case II.—George F., aged sixteen. Consulted me a week after injury.

History.—While firing a toy cannon it exploded injuring his eye. He consulted a doctor who prescribed a collyrium of sulphate of zinc and morphia. The eye was very painful, with extreme photophobia. Had been painful ever since injured, and was much inflamed. A small scar was discovered with difficulty in the limbus. Intraocular tension extreme. Complete posterior synechia, the lens opaque, and complete blindness in the injured eye.

I diagnosed foreign body in the eye, and advised immediate enucleation, sending him to Saint Mark's hospital. His people refused to have the operation and it was delayed four days. I enucleated the eye on the eleventh day after injury and found that a small piece of iron had penetrated the cornea, lens, vitreus, retina and choroid, and lodged on the sclerotic in the region of the entrance of the ciliary nerves. On the outside of the eyeball, immediately over the foreign body, was a mass of inflammatory tissue, and inflammation in the cellulo-fatty tissue of the orbit, and the vitreous chamber was full of pus. All the result of delaying a necessary enucleation when it was evident that it must be done sooner or later. Four days later an abscess developed in the cellulo-fatty tissue, as a result of inflammation preceding enucleation. The case recovered after a second operation for removal of the pus and inflammatory tissue. Sympathetic irritation was marked in the uninjured eye before enucleation of the injured member, and it was only with the utmost care that the patient recovered with one eye, after five weeks of confinement.

Had this case been properly treated he might have been saved much time and suffering and had a better stump, which as it was, was contracted and would not receive an artificial eye, and might have been saved an eye.

Case III.—Mary H., aged six. While playing with the scissors was stabbed in the eye, the blade entering at the sclero-corneal junction wounding the iris and lens. The iris protruded, which I carefully cut off, and after cleansing the eye with boracic acid solution I applied absorbent cotton and bandage, and watched it carefully. A synechia formed between the iris and capsule, keeping the aqueous from the lens substance, and the eye recovered with good vision, with only a scar in the edge of the lens.

Case IV.—George S., aged eight years; was struck in the eye with a switch, cutting through the cornea near its centre and fracturing the lens which swelled and protruded from the wound. I incised the cornea as for cataract, and excised a piece of the iris and then carefully removed the lens matter. The wounds healed and the eye recovered, looking quite natural, and had useful vision.

Case V.—Dewitt C., aged sixteen, of Cato, Michigan, while pounding iron with a hatchet head, was injured in the left eye. A homeopathic physician saw the case, and *said* he removed the foreign body. Four weeks later he came to my office. Could not see light. The eye was slightly inflamed but not painful. A small scar could be seen in the corneal margin on the nasal side. The lens was opaque and swollen, and there was complete adhesion of iris to the lens capsule, and anterior chamber nearly obliterated. On palpation, I found a very tender point in the ciliary region on the temporal side, on opposite side from the scar and a little higher.

I diagnosed foreign body in the eye, and performed enucleation. I found a piece of steel lying against the ciliary body in the region of the tender point, and surrounded by a large mass of inflammatory tissue. The vitreus was turbid, but the other tissues looked quite natural. A good stump was formed.

I do not wish to occupy your time with a longer list of cases, but have introduced these few , as illustrative of the points which I have tried to make in my paper. *Case I* illustrates, first, the fact that a foreign body may remain in the eye a long time and give rise to no marked symptoms; second, the importance of the history of the case from a diagnostic point of view, and a careful examination; and third, that an attempt at removal of a foreign body should be made even after many days have elapsed, if there is not much inflammation. *Case II* illustrates the ill-effects of neglect, carelessness, and delay. *Case III* the importance of the history of the case, of making a correct and early diagnosis, and teaches non-interference—where no foreign body remains. *Case IV* shows the good effect of removing a badly wounded lens, and also the assistance the history of the case affords in making a diagnosis; while *Case V* illustrates the possibility of making a diagnosis by *palpation* and the history together, as showing the carelessness practiced by some physicians when consulted in regard to injuries of the eyes.

I wish again to emphasize the protest against the ruthless sacrifice of eyeballs by enucleation because there is a foreign body in the vitreus, for surely if the eye is eventually lost, there is no harm in trying first to remove the foreign body before removing the eye, if you are *prepared* to do it, which one should be, to justify treating such cases.

In conclusion, I will say, that when it is possible to remove a foreign body through the anterior chamber, it is better than making a sclerotic incision, for sclerotomy sooner or later will cause detachment of the retina, and complete loss of vision. The first thing to do is to make a correct diagnosis in cases of injury to the eyes; then it is easy to determine what to do for them.

IMPULSIVE INSANITY.*

BY EDWARD C. MANN, M. D., BROOKLYN, NEW YORK.

MEDICAL SUPERINTENDENT SUNNYSIDE SANITARIUM FOR DISEASES OF THE NERVOUS SYSTEM, INEBRIETY AND THE OPIUM HABIT, FLATBUSH, NEW YORK; PRESIDENT NEW YORK ACADEMY OF ANTHROPOLOGY; FELLOW AND GOLD MEDALIST SOCIETY OF SCIENCE, LETTERS AND ART, OF LONDON; MEMBER MEDICAL SOCIETY OF THE COUNTY OF NEW YORK, ET CETERA.

IN impulsive insanity, there appear to be no delusions, although there is a subjective morbid condition of the nervous system, which misleads the mind and conduct. The morbid impulse is satisfied and exploded in the act of violence. Friends and relatives often narrowly escape being the victims of homicide, which is the act these impulsive maniacs often commit. The period just after the committal of an insane or homicidal act is probably the one in which fewest symptoms of insanity will be noticed. The period immediately preceding these overt acts demands the closest scrutiny, as we generally see at that time strange, altered looks and conduct of the patient. Important points are his former attacks, and the question whether the family or other observers may have noticed periods of slight depression indicating an insane diathesis; also, as to whether the patient slept badly, or has taken less nourishment than usual; the nature and character of the acts; the presence or absence of motion; the fact of the victim of his acts being near and dear, all tend to excite strong suspicion of insanity. An important question is, Does the person remember what has occurred after the overt act, or does there seem to be an unconsciousness of his acts? If the latter, they may be epileptoid attacks. In these cases of impulsive insanity the family is apt to be saturated with insanity. Very often one of the grandparents, and the brothers and sisters, will be found, upon strict inquiry, to have been practically insane. Where this is so we often find that from youth the patient has been odd, or eccentric. The fact of indications of insanity about the age of puberty are of great value in cases where an overt act is presumably the product and outcome of mental disease. Impulses to suicide and homicide, if a patient has ever shown them, are sure indications of the insane blood that has been inherited.

In all these cases we should look closely for epilepsy, where, sometimes, the only indications are nocturnal micturition or a bitten tongue. These last are apt to be incurable cases, and when sent to an asylum should not be released except under great and special precautions. The insane actions and conduct are shown in affective or psycho-sensory insanity, rather than insane conversation, delusions or hallucinations. These persons exhibit a morbid delusive conception or perception of subjective origin, causing change of mental character as compared with former self or normal ancestral type, through organic conditions originating in disease within the system, external motives playing but a seconday part when they influence at all the mental conduct. Some of these cases exhibit morbid sexual perversions. There are some women with perverted sexual instincts and a psycho-sensory insanity, who, at each menstrual epoch become possessed with a strong homicidal impulse or a suicidal impulse. We may have an instinctive psycho-sensory insanity hurrying the patient on to instinctive and automatic acts not preceded by reasoning and a reasoning psycho-sensory insanity determining acts which are the consequence of a certain intellectual operation. We find here an insanity of conduct, feeling or impulse, or impulse, or all combined, without such appreciable intellectual development that it would be recognized as insanity without the display of morbid feeling, impulse or conduct. These cases are less understood and studied than other victims of mental disease, because they are rarely brought into notice until some overt act is committed by such a person. Imperative conceptions and morbid impulsions are very characteristic of this class of cases.

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* Published exclusively in The Physician and Surgeon.

When physicians have to give their professional opinion in the court-room, they should be unanimous in testifying that no act which is the product of disease of the body affecting the mind by deranging its functions and causing a suspension or impairment of the intellect, the emotions or the will, can be construed into a crime. It is time that the laws should be amended to keep pace with medical science, and the absurd right and wrong test of insanity, which is no test at all, as every progressive physician knows, should be relegated to the dark ages where it properly belongs. Two-thirds of the insane know the difference between right and wrong as well as the sane do, but there is the absence of self-control produced by disease of the brain. Science bids us inquire, not whether a person knows the difference between right and wrong in regard to an overt act he or she has committed, but rather whether there has been a compulsion of disease, termed crime; whether there is an absence of self-control produced by disease; whether there is any power of resistance; whether the mental functions of feeling and knowing, emotion and willing are performed in their regular and usual manner; whether there has been change of character and change of conduct; whether the condition of mind is the product of disease; whether there is masked epilepsy; whether there is perverted feeling and conduct; what the heredity is; whether there have been former attacks of mental order; whether in women there are menstrual disturbances or ovarian affections which are a fruitful cause of psychic abnormalities, or a previous history of hysteria or overt insanity due to the sexual evolution, pregnancy, the parturient period, or lactation. We shall often find upon inquiry an entire change of character and habits, evinced by extraordinary acts and conduct, extravagance or parsimony, false assertions, and false views concerning those nearest and dearest, without absolute delusion. Its approach is gradual, rather than sudden, and the extraordinary character of the acts may not at first be so marked as subsequently. Friends wonder that a man or woman should say this or that, or should do things so foreign to his or her nature and habits, but some time may elapse before they can convince themselves that such conduct is the result of disease, and the acts may be such that many will look upon them to the last as signs merely of depravity.

When the insanity is well marked and the conduct is outrageous, there will be no difficulty in the diagnosis. But it may be less marked and it may consist of false and malevolent assertions concerning people, even the nearest and dearest, of plots and traps to annoy others, in which great ingenuity and cunning may be displayed, and there will be the greatest plausibility in the story by which all such acts will be explained away and excused. Where we can ascertain that this condition of things is something which has come over the patient, being formerly absent, and that a man or woman is altogether changed, we may suspect insanity, and we must also take into account that perhaps we have to do with a case that has a congenital defect and has been insane from birth. Such people are very acute, on the alert, have no scruples about falsehood, and will deny or justify everything with which they are taxed. Where the insanity is manifested in conduct, the medical man may never be a witness of it, and is obliged to receive on heresay that which the patient denies most strenuously. There may be in these cases, a period, though short, of acute insanity; as acute mania or melancholia which passed away and left a state of affective or impulsive insanity as a permanent condition, or the impulsive insanity may be a precursor of a more advanced stage of insanity, marked by the ordinary symptoms of delusions and hallucinations. When there is a rapid and progressive change, if the patient becomes more and more outrageous and eccentric, it is likely that in a short time unmistakable insanity will be displayed.

The most difficult form of psycho-sensory insanity to diagnose and estimate is the congenital moral defect occasionally met with in persons who have been from birth odd and peculiar and incapable of acting and behaving like other people. They may have some intellect and even genius in certain directions. We find that they are the offspring of parents tainted with insanity, and in childhood very likely have had fits, chorea, or other nervous troubles. As children they are very often very cruel toward animals or their brothers and sisters, and seem utterly incapable of telling the truth or understanding why they should do so. They have, so to speak, a criminal nature, a true moral imbecility, and it is very difficult to say how far they are responsible.

LECTURES.

SECONDARY NASAL SYPHILIS.

By PROFESSOR DIEULAFOY, Paris, France.

PROFESSOR OF INTERNAL MEDICINE, PARIS FACULTY; PHYSICIAN TO HOTEL DIEU HOSPITAL.

Since Ricord's time, syphilitic manifestations have been divided into primary, secondary, and tertiary. These last two words need some explanation. Many persons still think that the second period means the first and second years after the chancre, and that the tertiary lesions are only seen, from the third or fourth year. This is an error, for the morbid changes of syphilis cannot be distinguished, according to the time when they appear, but only according to their proper qualities. The one that corrodes the tissues, for instance, may very well appear during the second year of syphilis, and even before; and secondary symptoms may come on in the fourth, or even the fifth year.

We shall study to-day the secondary symptoms of the nose, that is to say those that interest the skin and the mucous membrane of that part. We want to dwell particularly on syphilitic coryza of the newly born.

First, as to the skin: The syphilitic dermatoses are very numerous; some twenty-six or twenty-seven kinds are described, according to the syphilographer who writes. We think this matter can be simplified. Let us see what clinical facts show. We have *dry dermatoses*, that you see by looking at them, or by touching them with a cloth: they remain dry. Then a second group that is found on the forehead, groin, and near the anus. If you apply a compress to these they soil it: being *humid dermatoses.* Then there is a third variety which have crusts on them: *crusty dermatoses.* While you may have on one person all these kinds: so *polymorph-dermatoses.*

Do we find all these varieties? Well, here is a man who has had a chancre; you strip him and find on the thorax, the internal surface of the arm, sometimes on the forehead, and as far as the nose, some dark marks on the skin, of a copper rose color or brownish. They have a glossy appearance although the skin alongside is dry. You may also find slight elevations of the skin, that are real papules, and whose coloration will recall to you salmon, or the meaty part of boiled ham. Theses syphilides may be papule-granulous, and these are frequently found near the nose. At other times the papule is wide, discoid, and presents the same coloration as the others. These are seen on the legs, and roots of the hair, where they form what is called the "*Crown of Venus.*" They sometimes surround the face. Again, syphilides may take a sheet form and be very large indeed, so that if you are not informed of the origin you will have great difficulty in making the diagnosis. At a certain age they are scaly and it is difficult not to confound them then with real psoriasis which is seen on the hands and feet.

So far, the manifestations we have spoken of, are the dry kind. The humid ones are characterized by erosive papules which have a special gloss. They soil linen and are very contagious as they can give rise to another chancre in another person. They are mucous plaques of the skin. The crusty forms are more or less thick and may be papulo-crusty. If we rub off the scab we find a reddish surface, which is damp, and the color of red fish (salmon), but the skin itself is not yet broken. Next to this variety we should place the pustulo-crusty. Here the skin is attacked, and you will see pus under the scab. Some of these hardly touch the skin and others go deeper, so several varieties have been named: acneform, impetiginous, ecthymatous, et cetera. The different manifestations, then, of syphilis, can, as we said, be classed in three groups: dry, humid, and crusty. They differ in aspect, but have many common characters. They are all indolent. They are aprurigineous and all have the copper color of the lean part of boiled ham. They are all polymorphous. In non-syphilitic dermatoses there is a type that is constant, but in these dermatoses they may be papulous, ecthymatous, and crusty all together or only one.

The larger part of these dermatoses may be found on the nose except roseola. If you will look at this preparation you will see a type of papulo-scaly syphilide.

On this one, papulo-tubercular syphilides. They have a wine color and the inscription on this wax specimen says that the patient was an alcoholic. On the last preparation you have a case where the patient had regular scales on his nose; these are pustulo-crusty syphilides.

Let us now study intra-nasal secondary syphilis. First in the adult and next in children. In the adult it is the source of a great many errors in diagnosis. Quite a number of people who knew, or did not know, that they had a chancre in former days, will come to you for a persistant cold in the head. You must investigate the matter; wash out the nasal fosse; have a good light and see well into the organ; you may then find erosions, or that the mucous membrane is red in spots, and covered with a membranous scale like that seen in diphtheria. Under the influence of treatment they may get on, but it is possible to find them later, when the alteration is still more profound and the lesions may become those of the terrible nature found in tertiary symptoms.

Gentlemen, you will be called to take care of the health of families who have children. You know perhaps already that the father has had syphilis which he thinks was cured. In such a case is there any danger for the possible children? Yes; often. The first months of the pregnancy will pass along fairly well, and all of a sudden you may be called to attend a premature confinement of seven months, for instance. The older authors said that syphilitic children were born *looking like old men*, but this we know now not to be true. Parrot showed this fact first. If there are visible lesions in such cases they are due to athrepsia, not syphilis. The syphilitic ones cannot often be seen. The child, however, may be born at term and the parents may ask you if there is any danger. The older writers all held that an infant of this kind presents visible signs of syphilis. Parrot, Trousseau, and Sevestre, have seen children born of syphilitic parents that look cachectic but present no appearance of syphilis. And in many of them they come into the world as well as possible with fair weight, sleep well, and do not have any sensible manifestation of the disease of the parents. The father will ask you, How long must we wait to be sure that this child will not have any symptoms of inherited syphilis? Lasègue, and Trousseau, in 1847, already answered this question. I have often heard him refer to it, when in his service, at the old Hotel Dieu. It may be said that it is rare that syphilis will appear in the infant *before* the tenth to the fifteenth day and it is also rare *after* the sixth to eighth month. Cuffer says that the syphilitic child is pale and has a small number of hematies in its blood. As to tardy tertiary syphilis, so well studied in England by Hutchinson, and by Professor Fournier here, it may come at three years of age, and even up to adult age. These two kinds of inherited syphilis do not follow one another, but seem to be a double incubation of the disease. Having such an infant of about two weeks of age what will be the symptoms? Well, they are not fixed or certain; sometimes it will be some cutaneous eruption, but most often, according to Trousseau, it is coryza that appears first. Roseola of the baby resembles somewhat that of the adult, but differs from it in some ways. It will be found mostly about the anus, thighs, and flanks and presents itself under the form of rounded spots, having sometimes the appearance of papules or scales, which may resemble the scaly psoriasis of the hands and feet. As the skin is tender at this age, and often in contact with feces and urine, it is like a mucous membrane; and in point of fact we often find plaques. In the newly-born, however, the most frequent sign is coryza. At first this symptom will not annoy the parents. They think that it is a little cold, but when the child sleeps it draws the air hard into its nose, different to the sound heard in croup. As it is all nasal, however, the respiration goes on, and the child gets thin, although it has no fever; finally it will not take the breast, as it is suffering. It can no longer swallow, as the mucous membrane is swollen, and sanious or purulent matters obstruct the nose. If the physician does not know that there is syphilis in the family, he may go on for ten days without making a diagnosis. Besides, how difficult it is to ask the father if he has had syphilis? We must search carefully for signs of it elsewhere. Fissures each side of the lobule or on the inferior lip, are a good sign. If you can find mucous plaques about the anus, scrotum or vaginal folds you need not then ask any questions, but begin the treatment at once, for a child that is not treated dies very quickly.

There are much more difficult cases. I saw one lately, a child of four or five, who had a coryza, and sometimes bleeding from the nose, slight sore throat and no appetite. There was an appearance like false membranes of the throat, which, however, did not present the microbe of diphtheria under examination. As the culture made, however, had some streptococci in it, we thought of an angina of that nature. Several days afterwards the mother told us that food was not swallowed, but came back by the nose and that the little patient's head trembled on his shoulders and his legs no longer supported him. The diagnosis of diphtheritic paralysis was made; but it was a syphilitic coryza, as we found out by careful examination of the nose.

Having made a diagnosis, you must at once institute a treatment. Shall we give iodide of potassium? No; never. The iodide is a possible medicine for the nurse, but *never for the child.* Shall we make mercurial frictions? By no means, because the infant's skin is very tender and thin and you would get at once a mercurial erythema. The best treatment is to order Van Swieten's solution, whose composition is as follows:

℞	Hydrargyri Bichloridi, ...	1 gramme.
	Alcoholici, ...	100 grammes.
	Aquæ, ...	900 grammes.

Misce.

You see that one gramme of this solution gives you one milligramme of mercury. In a small glass of milk put a gramme of this solution and have it given in two or three times during a day of twenty-four hours. Under the influence of this treatment the child quickly comes back to life; you have made a resurrection. If, however, it does not support this treatment well, and gets diarrhea, then you must resort to baths of corrosive sublimate. Trousseau never used more than a gramme at a time. You may make your formula as follows:

℞.	Alcoholici, ...	50 grammes.
	Hydrargyri Bichloridi, ...	1 gramme.

Misce. Signa.—Put this into the child's bath. If there are syphilides of the skin, then do not use more than half this dose, for each bath, and indeed it will often be found well to put a less quantity, say twenty centigrammes per bath of the bichloride of mercury.

CORRESPONDENCE.

"SPURIOUS LABOR."

EDITOR OF The Physician and Surgeon: On my return from a meeting of the medical board of examiners of Montana, I am astonished to see in the April number of your journal a very personal article signed T. G. HEINE, M. D., in alleged correction of some statements made by me in the report of a case of "Spurious Pregnancy and Spurious Labor," published in the February, 1893, number of the same journal. My report of the case was made in good faith; was absolutely correct in all its statements; did not refer to DR. HEINE, or to any other physician by name, and was reported to the Lewis and Clark county medical association, for the reasons stated therein, namely, the rarity of spurious labors, and also as tending to show that it is very difficult to displace an impression once implanted in the mind. It appears that DR. HEINE'S correspondence further goes to prove the latter assertion. In DR. HEINE'S alleged correction of some of the statements made by me, I fail to find any of my statements refuted or corrected, except that he did not tell the patient on his first examination that she would be confined in ten or twelve days (on this point the patient's statement in her letter published with my article is amply sufficient to all who know the parties), but on the contrary, all of them touched upon by him are substantiated. The fact remains that I was misled as to the actual condition of the patient; so was DR. HEINE; and so was the husband of the patient's sister misled in his wife's similar case occurring at the same time.

DR. HEINE says he "proceeded to examine with my index finger in the vagina, and my other hand on the abdomen, * * * but was able to map out to my own satisfaction, a normal, non-pregnant uterus." I simply submit that this would be an impossibility to any dextrous, well-educated physician (other than DR. HEINE), in a patient five feet, one and one-half inches in height, and weighing one hundred and eighty-two pounds, with abdominal walls at least six inches in thickness, and, as he says, with the "abdominal walls tense." A remarkable diagnosis?

Again DR. HEINE says "I prescribed for the case with a view to reëstablish the menses. I saw the patient a few weeks later, when she told me she had menstruated and was feeling pretty well. After this I lost track of the case." The patient was under DR. HEINE'S care in September, 1892. In November, 1892, after my return from New York, I was sent for; was informed by the patient that she had not menstruated since her spurious labor; had not attempted any treatment to that end, except to wear an alleged electric belt, and desired me to treat her. I did so, and under date of December 10, 1892, she wrote me "My first monthly period came the 6th; have not had so profuse a one for years, this is the fourth day and no signs of stopping. I feel very much encouraged and shall be very strict in diet so as to lose more flesh."

Again, DR. HEINE says he has "confined several hundred women and has treated four cases of spurious pregnancy, but has never attempted to produce a miscarriage in an unimpregnated uterus." Possibly this is true. I cannot disprove the assertion; but if DR. HEINE has escaped this error throughout his long and busy professional life, has he been equally fortunate in avoiding errors more gross and practices generally condemned as reprehensible?

Now, Mr. Editor, while it is true that a medical journal is a proper medium for fair criticisms made in good faith on medical points appearing therein, I do not care to use such a medium for the purpose of attack on any physician against whom I may think I have a score to settle; but inasmuch as a personal attack directed against me has been given space in your journal, I respectfully ask that this communication be given an equal prominence therein.

Very truly, JAMES M. SLIGH, M. D.

GRANITE, MONTANA, May 6, 1893.

EDITORIAL ARTICLES.

THE AMERICAN MEDICAL ASSOCIATION.

THE meeting of the American medical association held this year in the city of Milwaukee, opened with vigor and a promising attendance. Nearly nine hundred names were registered, indicating that there was no lack of interest on the part of the profession in the affairs of the association. The attendance was, however, at its greatest, probably, on the first day. Many came, registered, and then departed with their minds on the attractions offered by the World's Fair. Even the exuberant hospitality of the Cream City, could not entirely outrival the seductions of Chicago, and the selection of Milwaukee as a place of gathering did not, therefore, fulfill all the expectations formed of it for this reason.

Important questions, which were supposed to demand settlement at this meeting were not considered. The revision of the code which was expected to absorb much of the time of the general session was postponed. This will allow opinion to assume more definite form by the time that action shall be taken upon it.

The section-work of the association opened with activity, and a very large number of papers appeared by title on the program. A large number, however, failed to be heard from when called.

San Francisco was happily selected as the next meeting-place. The Pacific coast has long offered an invitation to the association, and it is to be expected that a meeting in that locality will induce a large number of the profession of the western states to enlist themselves in the work of the association.

THE GERMICIDAL VALUE OF LIGHT.

THE hygienic value of light has received new confirmation in the experiments of PROFESSOR MARSHALL WARD recently commented on in the *British Medical Journal.* In these experiments, agar-agar was inseminated with anthrax spores. The gelatine was allowed to form in a dish and was then covered with black paper, save such portion as was exposed to the light by an opening made in a stencil letter. Colonies of bacilli developed except on the surfaces exposed to the light. Other experiments of a control character were made, all of which tended to prove that actinic rays of light possess germicidal power. The mustiness of cellars, and rooms from which light is excluded, is universally recognized. The correlated fact, cannot be too speedily recognized, that plenty of sunlight is one of the most effective, and happily one of the cheapest germ-destroying agents.

EDITORIAL BREVITIES.

THE MEDICAL EDITORS' ASSOCIATION.

THE meeting of medical editors on the evening prior to the convening of the American medical association was a highly successful gathering. DR. CULBERTSON's address was full of suggestive points. The address of MR. HART, after the dinner, was wise, witty and eloquent, and a great treat to all his audience. The crowning completeness of the occasion was reached when the jovial and delightful DR. I. N. LOVE, sang his pathetic little song. This gentleman has the gift of feeling at ease everywhere, and would nowhere be taken for "a stranger and a long way from home."

REFORM IN THE SPELLING OF MEDICAL TERMS.

ONE of the suggestive papers contributed to the Milwaukee meeting, was one read by DR. GOULD, of Philadelphia, upon the spelling of medical terms. DR. GOULD suggested some changes in the spelling of medical words, such as the dropping of the useless diphthong in words like hemorrhage, edema, anesthesia, and the elision of the 'al' in words like chemical, pathological, etc. The reform demanded is a mild one, and will be generally conceded by medical writers. Why the reform should stop at this point is not obvious. Why should we not spell heart, hart, and tongue, tung. Phonetic spelling would seem to be the goal the author of the paper was indirectly advocating. The sooner the spelling of words is brought into close correlation with their pronunciation, the sooner we shall doubtless arrive at the truly scientific mode of writing and speaking. Pronunciation of language changes from hour to hour, and unless orthography alter its methods radically, there will be always work for those, who, like DR. GOULD, seek to rid us of the most burdensome of our archaisms.

MEDICAL NEWS.

PARIS has two hundred and ten medical journals.

STOCKHOLM will soon have a dental college for women.

RUSH MEDICAL COLLEGE gives a course in medical ethics.

THE hospitals in London are filled with scarlet fever patients.

DR. GEORGE HOMAN has been elected health commissioner of Saint Louis.

ONE hundred thousand, it is estimated, are addicted to the morphine habit in Paris.

DR. S. E. HUDSON has purchased one-half interest in *Daniel's Texas Medical Journal.*

NEW YORK has an electro-therapeutical society. Dr. William J. Morton is president.

DR. DAVID W. CHEEVER has been appointed emeritus professor of surgery in Harvard university.

THE obstetrical society of France will hold its tenth meeting on August 5, 6 and 7. Symphyseotomy and obstetrical service of France (its actual and desirable condition) will be questions for discussion.

There are nine hundred thousand quarts of milk delivered daily in New York City.

New York City has three thousand three hundred and five practicing physicians.

A new college building has been erected by the Louisville medical college authorities.

There were six hundred and thirty-five graduates of medicine in France during the past year.

Chicago has one hundred and fifty-five women physicians engaged in the practice of medicine.

Dr. Baker of the state board of health is spoken of as the next health officer for the city of Detroit.

There were sixteen thousand four hundred and ninety-four bodies cremated at Tokio during the year 1892.

Nearly one hundred thousand criminal abortions, it is estimated, are performed in New York annually.

A sanitary convention under the auspices of the state board of health will be held at Hillsdale, July 6 and 7.

A syndicate has purchased Saint Luke's hospital, New York City, for two million five hundred thousand dollars.

Baltimore has appropriated forty-five thousand dollars for the purpose of building an infectious hospital in that city.

There are four hundred and thirty-four students attending the medical department of the university of California.

The dispensaries of New York city treat about four hundred and fifty-two thousand four hundred gratuitously each year.

Dr. A. H. Ohmann-Dumesnil retires from the editorship of the *Medical Review* and is succeeded by Dr. L. T. Riesmeyer.

The city of New York expends six hundred and twenty-five thousand dollars annually in caring for eighteen thousand lunatics.

The American neurological association will hold its nineteenth annual meeting at Saratoga, New York, July 25, 26, and 27, 1893.

Eight hundred and seventy-seven physicians were registered at the Milwaukee meeting of the American medical association.

Belgium consumes one hundred million dollars worth of liquors every year. There is one saloon to every thirty-nine inhabitants in that country.

The governor of New York has vetoed the bill providing for the establishing of the proposed Sonyea colony, for the segregation and colonization of epileptics.

Physicians objecting to the prescriptions of patented names, instead of writing for hypnol, can call for mono-trichlor-acetyle-dimethyl-phenyl-pyrazalon.

At the last annual meeting of the Georgia medical association the first woman physician was admitted to membership. Her election was unanimous.

THE QUARTERLY JOURNAL OF DERMATOLOGY is the title of a new journal of skin diseases, edited by Dr. A. H. Ohmann-Dumesnil, of Saint Louis.

ACCORDING to the census report there were ninety-seven thousand five hundred and thirty insane patients treated in the United States during the year 1889.

A NEW TREATMENT OF CHOLERA.—Dr. Fidcraff, of Moscow, has been treating cholera by means of injections of cholera bacilli added to an extract of thymus gland.

THE Mississippi valley medical association will hold its nineteenth annual meeting at Indianapolis, Wednesday, Thursday, and Friday, October 4, 5, and 6, 1893.

THE Alabama state examining board has a record of rejecting forty-one and sixteen hundredths per cent. of candidates who apply for a license to practice medicine.

THE college of physicians and surgeons is the name of a medical school recently chartered in Richmond, Virginia. Dr. Hunter McGuire is president of the faculty.

DR. J. B. HAMILTON has been appointed editor of the *Journal of the American Medical Association.* Dr. J. C. Culbertson will resume control of the *Lancet-Clinic* of Cincinnati.

DR. W. N. BRENNAN, of Saint Louis, Missouri, has sued Mayor Walbridge, of that city, for fifty thousand dollars damages, sustained by him through removal from the office of health commissionership.

THE July number of the *American Journal of the Medical Sciences* contains an article "On the Parasitic Nature of Cancer," from the pen of Professor Heneage Gibbes, M. D., of the university of Michigan.

DR. GOODELL has resigned the professorship of gynecology in the university of Pennsylvania, and has been made honorary professor of gynecology. Dr. C. B. Penrose has been elected to fill the vacancy.

THE late Dr. James Aitkens Meigs, professor of physiology, in the Jefferson medical college, left a library of about five thousand volumes, which his father has presented to the academy of natural sciences at Philadelphia.

DR. W. BURNS THOMPSON, formerly of Edinburgh, Scotland, and founder of the medical mission of the Canongate, died recently at Bournemouth, England. For many years he was the central and most conspicuous figure of medical missions in Scotland.

A MOVEMENT is on foot in France which contemplates the pensioning of widows of physicians who die during an epidemic while engaged in their professional duties. Widows of officers who die on the battle-field receive compensation, and it is proposed to place medical and military men on equal footing in this regard.

THE District of Columbia medical society will celebrate the seventy-fifth anniversary of its existence on the 16th of February, 1894. The committee of arrangements consists of Drs. Busey, Charles H. Stowell, Smith, McArdle, S. S. Adams, Ober, and Snyder, and it is proposed to make the event the most brilliant of its kind ever witnessed by the profession of Washington.

THE court of civil appeals of Texas holds that the testimony of physicians relating to what they have acquired from the study of standard medical works, rather than from experience in actual practice, is admissible in evidence.

FEE BILL OF THE DETROIT MEDICAL AND LIBRARY ASSOCIATION—Physicians desiring this fee bill can obtain it of the librarian of the society. It is published on thick cardboard suitable for hanging on the walls of the office.

A CITIZEN of Brooklyn, New York, has offered to contribute fifty thousand dollars toward the erection of a one hundred thousand dollar building for the various medical societies of that city, provided the societies devote an equal amount to the undertaking. A plan for securing the desired amount is being considered.

DR. GEORGE M. STERNBERG has been appointed surgeon-general of the army. This appointment will give universal satisfaction to the medical profession, as it recognizes the services of one who has made for himself a high reputation as a practical man of science.

THE medico-legal society of Chicago elected the following officers at its annual meeting held on the 10th ultimo: President, Dr. D. R. Brower; vice-presidents, Drs. James Burry and C. D. Wescott; treasurer, Joseph Mattison; secretary, Dr. Archibald Church.

DR. LANDON CARTER GRAY, of New York, proposes that the method of introducing expert medical testimony in suits at law be changed by giving the presiding judge power to select medical advisers to sit with him on the bench in trials that do not require juries, and the holding of a conference of all the medical experts in jury trials.

THE third annual meeting of the American electro-therapeutic association will be held in Chicago, September 12, 13 and 14, at Apollo hall, Central music hall block. Members of the medical profession interested in electro-therapeutics are cordially invited to attend. Augustin H. Goelet, M. D., president, Margaret A. Cleaves, M. D., secretary.

DR. CORNELIUS N. HOAGLAND, of Brooklyn, New York, has offered fifty thousand dollars toward the erection of a building to be used as headquarters for the various medical societies of the regular school in that city, with the proviso that they secure a like sum. This gentleman is the founder of the Hoagland laboratory at the Long Island college hospital.

THE COLLEGE OF PHYSICIANS AND SURGEONS, CHICAGO.—In order to encourage graduates of literary and scientific schools to undertake the study of medicine, the college of Physicians and Surgeons offers ten scholarships, each of which is valued at one hundred dollars a year, for three years, to such students as present the best qualifications for a medical career.

AT the recent meeting of the Indiana state medical society the following officers were elected for the ensuing year: President, Dr. C. A. Daugherty, South Bend; vice-president, Dr. T. F. Leech, Crawfordsville; secretary, Dr. E. S. Elder, Indianapolis; assistant secretary, Dr. A. A. Shipman, Seymour; treasurer, Dr. J. O. Stillson, Indianapolis. The next meeting will be held at Indianapolis, on the first Thursday in May.

PATHOLOGICAL CURIOSITY.—Professor Gayet, of Lyons, cured a man of arterio-venous aneurism of the internal carotid artery and the cavernous sinus. He was desirous of verifying his cure by post-mortem, so had the man tattooed with these words: "Arterio-venous aneurism of the cavernous sinus cured; please make autopsy."

PHYSICIANS attending the Columbian exposition will be deeply interested in the sewerage system. There are six thousand sanitary closets built in marble compartments. From these the sewage is conveyed to large tanks at the southeast corner of the grounds, there purified by chemicals, its solids pressed into cakes and burned in furnaces. Arrangements are made for a permanent city of three hundred thousand inhabitants, and this method will be given a thorough test.

THE American medical association elected the following officers for the ensuing year: President, Dr. J. F. Hibberd, of Indiana; first vice president, Dr. John A. Wyeth, of New York; second vice-president, Dr. I. N. Love, of Missouri; third vice-president, Dr. T. E. Murrell, of Arkansas; fourth vice-president, Dr. U. O. B. Wingate, of Wisconsin; treasurer, Dr. R. J. Dunglison, of Pennsylvania; secretary, Dr. W. B. Atkinson, of Pennsylvania; librarian, George B. Webster, of Illinois. The next meeting will be held in California, in May, 1894.

THERE are two thousand five hundred and thirty-one physicians in active practice in California, divided as follows: Regulars, one thousand nine hundred and ten; homeopaths, three hundred and fifty-four; eclectics, two hundred and sixty-seven. There is one physician to every five hundred and thirty inhabitants. The medical register shows that there are about one hundred and forty-three illegal practitioners, and to this number the *Pacific Medical Journal* would add about one thousand quacks who follow the "healing business" and "perform wonderful cures by superhuman power and divine assistance."

THE supreme court of Illinois has rendered this definition of a medical expert: "A practicing physician who is shown to be a graduate of a regular college and to have practiced his profession for many years, is competent to give his opinion upon a hypothetical question, setting forth the symptoms of a deceased person, whether the death was from the effects of arsenical poisoning, although, he may not be shown to have had any case of such poisoning. A medical witness, in giving his opinion as an expert, is not confined to opinions derived from his own observation and experience, but may give an opinion based upon information derived from medical books."

THE American medical editors' association held its annual meeting and banquet at the Pfister hotel, Milwaukee, Wisconsin, on the 5th ultimo. Dr. J. C. Culbertson read an address on "The Aims and Objects of Medical Journals," Dr. Geo. M. Gould read a paper on "The Spelling of Some Medical Words," and Dr. T. D. Crothers read a paper on "Some New Phases of Medical Journalism." After the banquet Dr. Ernest Hart, of London, England, editor of the *British Medical Journal*, delivered an address on "Journalism as a Career." The following were elected officers of the association for the ensuing year: President, Dr. Charles H. Hughes, of the *Alienist and Neurologist*, Saint Louis; vice-president, Dr. Frank B. Foster, of the *New York Medical Journal;* secretary, Dr. George M. Gould, of the *Medical News*, Philadelphia.

The Arkansas medical association concluded a very successful meeting at Batesville, on June 2. The following officers were elected for the ensuing year: President, Dr. D. C. Ewing, of Batesville; vice-presidents, Dr. Adam Guthrie, jr., of Quitman, Dr. W. W. Bailey, of Fort Smith, Dr. E. A. Baxter, of Melbourne, Dr. D. L. Jones, of Haynes; secretary, Dr. L. P. Gibson, of Little Rock; treasurer, Dr. A. L. Breysacher, of Little Rock; librarian, Dr. R. B. Christian.

The "jag cure" bill recently passed by the Michigan legislature is a unique method for the treatment of drunkenness. A person arrested for being drunk may, at the option of the court, give a one hundred-dollar bond for the performance of a promise to take treatment at some established cure to be therein specified for the period of thirty days at least, the rules of treatment and regulations of the institute to be strictly observed. Sixty days after this recognizance he must appear in court to answer to the charge, and to promise abstinence from liquor for ninety days. The old law of punishment can be applied in the event of failure to comply with these regulations. The institute receives seventy dollars from the state for each person treated.

The National association of railway surgeons, at its recent annual meeting in Omaha, passed a resolution favoring national, rather than state, control of quarantine; the various aspects of traumatic neurosis were considered in a series of comprehensive papers; Galveston, Texas, was fixed upon as the next place of meeting; and the following officers were elected: President, Dr. W. J. Galbraith; first vice-president, Dr. E. R. Lewis; second vice-president, Dr. Thomas H. Manley; third vice-president, Dr. E. F. Yancey; fourth vice-president, Dr. E. A. McGannon; fifth vice-president, Dr. E. G. Cochran; sixth vice-president, Dr. W. B. Blaksley; secretary, Dr. J. M. Linnon; assistant secretary, Dr. J. H. Ford; treasurer, Dr. S. Harvey Reed; executive committee, Dr. A. J. Mullen, jr., Dr. J. S. Murphy, Dr. A. A. Thompson, Dr. C. K. Cole. This committee is empowered to select the date on which the next meeting will convene.

The Nu Sigma Nu.—The seventh meeting of the grand council of the Nu Sigma Nu fraternity (medical) was held in Chicago, June 12 and 13, under the auspices of the three Chicago chapters situated at the Chicago Medical, the Physician and Surgeon, and Rush colleges. Meetings were held in the new building of the Chicago medical college. Monday morning, June 12, the meeting opened with a large number of delegates present from all parts of the continent. The reports of the officers and chapters showed the fraternity to be everywhere in a most prosperous and flourishing condition. Members may congratulate themselves on the progress the society has made, it having assumed proportions which exceed the expectations of the most sanguine. A vast amount of important matter was disposed of at the meeting. The constitution was amended to meet the present needs, so that it will hardly be recognized by its framers. One important feature is that in future no more honorary members will be added to the roll. All the honorary members present expressed themselves pleased with the move, for they had long wished to be more in touch and on the same plane with the active members. The discussion of a still further extension to Europe was taken up. Although it was the sense of the meeting that the fraternity should be conservative in establishing chapters, the plan was looked upon with favor. The meeting authorized the publication of a new and complete catalogue of members, and a song book of Nu Sigma Nu songs. In the evening an elaborate banquet was prepared for all at the German press club banquet hall. Over eighty brothers gathered about the board to praise in song and story the mysteries of Nu Sigma Nu. On Tuesday morning the meeting adopted an entirely new ritual, which contains much that is beautiful and instructive from the former ceremonial, but elaborated and better adapted for secret work. The meeting wound up affairs by electing the following officers for the ensuing two years: President, Dr. John L. Irwin, Detroit, Michigan; vice-president, Dr. J. T. Christison, Saint Paul, Minnesota; secretary, Dr. Thad. H. Walker, Detroit, Michigan; treasurer, Dr. F. G. Stubbs, Chicago, Illinois; historian, Dr. R. L Parker, New York City; guard, Dr. J. H. Macready, Cincinnati, Ohio. In the afternoon Professor Senn held an instructive and interesting clinic, for his visiting brethren, in the Rush medical college; this was followed in the evening by a theatre party tendered the visiting delegates at the Columbia to see Lillian Russell in "Giroffle-Giroffla." All who attended the convention were loud in their praises of the right royal way they were entertained by their Chicago brethren. Minneapolis and New York city both want to have the meeting two years hence. The council will accept one of these invitations later.

RECENT PUBLICATIONS.

REVIEWS.

APPENDICITIS AND PERITYPHLITIS.*

The subject of appendicitis has been pretty thoroughly canvassed on all sides, but the views of a French observer have been placed before us in the present volume in an interesting form. The crying question of operation or no operation is discussed very temperately and more conservative measures recommended than are usual with many American surgeons. The justification of an operation is not admitted in its diminished mortality. If it is unnecessary it is as unjustifiable as if attended with high mortality. The data gathered together in this little work make it a valuable addition to the literature of the subject.

* By Charles Talamon, M. D., physician to Tenon hospital, Paris, France, Translated by E. P. Hurd, M. D. Physician's Leisure Library Series. Paper, twenty-five cents; cloth, fifty cents. Geo. S. Davis, Detroit.

THE SURGERY AND SURGICAL ANATOMY OF THE EAR.*

As a compendium of the topographical anatomy of the ear, the little book before us will be found excellent. The plates are photographic reproductions of the author's drawings from nature and these are elucidated by a concise and descriptive text. The pathological conditions which affect the ear, and the operations invented for their relief, are reviewed in a lucid manner.

* By Albert H. Tuttle, M. D., Cambridge, Massachusetts, with twenty-eight illustrations. Physician's Leisure Library. Paper, twenty-five cents; cloth, fifty cents. George S. Davis, Detroit.

BRAIN SURGERY.*

An extremely practical and clinical manual on brain disease, written after the manner of the author's well-known manual of "Familiar Forms of Nervous Disease," has been written by Dr. Starr. The author deals with all the indications for the operation of trephining, and cites cases illustrative of each variety. The rôle of the operation in epilepsy is very carefully elucidated. The diagnosis of conditions requiring surgical interference for their relief, the main data of localization, and the details of operation, are all carefully commented upon in such a way as to form an accurate and efficient guide to those dealing with the problems presented in this important branch of medicine and surgery.

* By M. Allen Starr, M. D., Ph. D., professor of diseases of the mind and nervous system, college of Physicians and Surgeons, New York. Fifty-nine illustrations. William Wood & Company, New York.

LESSONS IN PHYSICAL DIAGNOSIS.*

This well-known work requires no introduction to physicians or students. The tenth edition thoroughly revised and corrected is now issued. Some of the chapters have been entirely rewritten and a new one on chemical microscopy has been added. It will probably continue for many years to come to occupy the high position among manuals of its kind which its author's name and fame have secured for it.

* By Alfred L. Loomis, M. D., LL. D., professor of the practice of medicine and pathology in the university of the city of New York. Tenth edition, revised and enlarged. Octavo. Illustrations, some in color. Two hundred and forty pages, extra muslin. Price $3.00 New York: William Wood & Company.

MEDICAL PROGRESS.

MEDICINE.

THE SPECIFIC TREATMENT OF CHOLERA.

Imbued with the idea that as a result of tissue-metamorphosis there are produced in the lower organisms, as in the higher, certain substances, some of which (designated autotoxines) are injurious if not eliminated, while others (designated allotoxines) are protective and conservative, Klebs (*Deutsche Medicinische Wochenschrift*, Numbers XL and XIV, 1892) has endeavored to separate from cultures of cholera bacilli those substances that are injurious to the human organism, leaving those that are inimical to the cholera organism. To this end he filtered sterilized cultures of cholera bacilli and concentrated the fluid obtained over the water bath. From this, by means of absolute alcohol, he precipitated the substance which he believed to be injurious to the human organism, leaving in solution the substances that he believed are bactericidal, curative, and immunifying, to which the name anticholera is given. It was first shown that, when mixed in small proportion with agar and gelatin, this material possesses the power of preventing the development of cholera-organisms inoculated upon these media, as well as of checking the development of the organisms when already in process of cultivation. Other organisms were not similarly influenced. Next, it was shown that anticholerin is not toxic for guinea pigs, and subsequently the same fact was demonstrated with regard to man. The next step was to demonstrate that guinea pigs previously treated with anticholerin were proof against inoculation with cholera, while untreated animals under the same conditions, presented characteristic local and general manifestations. It was also shown that immunity was conferred as a result of the treatment of other animals with the fluid that collected in the abdominal cavities of such animals as were inoculable. Finally, it remained to be determined if any therapeutic results could be obtained in animals already infected with the cholera. These various points having been determined in the affirmative, the agent could now legitimately be employed in the treatment of cases of cholera in man. With the consent of the authorities at Hamburg a number of patients were thus treated, and the results are published by Manchot (*Deutsche Medicinische Wochenschrift*, Number XLVI, 1892, page 1050). The cases selected were of the higher and the moderate grades of intensity and numbered thirty-one; of these, twenty-one died—a mortality of sixty-seven and seven-tenths per cent. Of one hundred and three parallel cases treated with saline infusions, eighty-seven died—a mortality of eighty-four and five-tenths per cent. As a rule, one cubic centimetre of the agent was injected on the first day six or seven times; on the second day, five or six times; on the third day three times; on the fourth day, once or twice. Each case received from fifteen to eighteen injections. The largest total amount given in any one case was thirty cubic centimetres. Depression of temperature constituted the indication for giving the injection, which was almost invariably followed by febrile reaction. Of course, warmth, stimulants, hypodermatoclysis, enteroclysis, venous transfusion, and such other measures as seemed indicated in the individual case, were employed in conjunction with the injections.—*American Journal of the Medical Sciences.*

SURGERY.

THE RESULTS OF TREATMENT BY TRACHEOTOMY AND INTUBATION IN SIX HUNDRED AND NINETY CASES OF DIPHTHERIA.

In an exhaustive paper, in which the indications for and comparative results of these methods are minutely studied, comprising six hundred and ninety cases of diphtheria occurring between 1874 and 1891, in the Children's hospital, in Zürich, Baer (*Deutsche Zeitsch. für Chir.*, December, 1892, Band XXXV, Hefte 3 u. 4) concludes that the better average results obtained by the method of intubation are not due to the earlier operation, but *caetris paribus*, are found in the operation itself, and especially in the youngest patients. There is apparently no distinction to be made in sex, either as regards prognosis or the course of the disease after operation. The mortality in the six hundred and ninety cases was forty-three and eight-tenths per cent. Or, according to the tracheotomy and intubation periods, forty-five and three-tenths per cent., and thirty-nine per cent. respectively. Since, in the latter period, there was a greater number of operations in the pharyngo-laryngeal cases, in which the mortality is always very high, the actual mortality during the intubation period was eight per cent. better than during tracheotomy.

The author does not, however, believe that the intubation operation is a rival of tracheotomy, but rather a means to be used before and in conjunction with it, tracheotomy being reserved for cases in which intubation fails. He gives the following as his indications and contra-indications for performing intubation. These are not as many as have formerly been insisted upon, and he believes that the spread of the diphtheritic process into the trachea is not a contra-indication, as is shown by many cases reported. Feeble children should have intubation, since the wound complications make their chances much less. Cases which are brought *sub finem vitae* need intubation with short tubes, or tracheotomy. When superior tracheotomy cannot be performed, intubation, on account of its shorter duration, is indicated. Indications for a secondary tracheotomy following after intubation are: (1) Where masses of membrane or free portions prevent laryngeal respiration, even after aspiration. This is, however, seldom observed. (2) When laryngeal and tracheal stenosis persist after intubation has been performed. (3) Where it is impossible to insert the tube on account of its being coughed up, and where there is threatened asphyxia. The indications for a primary tracheotomy and contra-indications of intubation are: (1) Complete closure of the naso-pharyngeal space through swelling and membranous deposit on the mucous membrane of the pharynx and tonsils. (2) Intense edema of the glottis. (3) A retro-pharyngeal abscess as a complication. (4) In cases where the short tube cannot be used. He also recommends intubation in all forms of chronic stenosis, and reports two new cases.—*American Journal of the Medical Sciences.*

TREATMENT OF BUBO BY EXCISION.

Dr. Watson has treated twenty cases of bubo by excision, followed by attempt to secure union of the wound by first intention. The buboes were syphilitic, chancroidal, gonorrheal, tuberculous and traumatic in nature. In most of the cases the conditions were extremely unfavorable to primary union. In all the operations the following rules were carefully observed:

(1) To remove thoroughly all diseased tissue and to leave, as far as possible, a perfectly healthy surface in every part of the wound. (To secure this it is always necessary to carry the dissection down to the fascia covering the abdominal muscles; sometimes to expose the femoral vessels, and generally the external inguinal ring).

(2) To excise such portions of the skin as threatened to become necrotic or had already become so.

(3) To curette the under surface of the skin flaps.

(4) To thoroughly swab the whole wound with dry sterilized gauze sponges wet with a solution of corrosive sublimate one to four thousand.

Two precautions should be especially observed: First, to guard against wounding the femoral vessels and the spermatic cord, and to proceed with especial caution when dissecting about the inguinal canal, lest an unsuspecting hernia be wounded. Second, the divided lymph vessels should be tied as far as possible, to prevent exudation into the wound cavity.

In cases in which the skin was not at all, or moderately inflamed, one of two incisions was employed: (1) A crescentic cut carried well below the area of inflamed skin through the healthy skin. A large flap was then dissected up, exposing the diseased glands, which after their removal was turned down and sutured on the line of the first incision. In some cases drains of sterilized silk were inserted through an opening below the line of incision. (2) A long incision parallel with Poupart's ligament, through the skin across the middle of the swelling. The skin was dissected up, the glands exposed, and the wound sutured without drainage. The first incision was preferred. In cases in which the skin covering the bubo had broken down, the last incision was employed, being modified by dividing it towards its middle so as to form an ellipse, which included the area of necrotic skin and so removed it. In the author's cases enough sound skin was left to permit approximation of the wound margins. Secondary suture was resorted to in some cases, the sutures being introduced at the time of operation, but the wound left open and packed with iodoform gauze for twenty-four or more hours, when it was closed. This method has the advantage of allowing free evacuation of fluids after the operation.

Excision of buboes in the above described manner, is claimed by the author to materially abridge the period of healing of buboes. In cases in which the wounds healed by primary union, the average duration was sixteen days; in those healing by granulation it was thirty-four days.—Dr. F. S. Watson, Boston, in *Journal of Cutaneous and Genito-Urinary Diseases.*

SOME MISTAKES IN THE USE OF INTRAVESICAL INJECTIONS IN THE TREATMENT OF THE CYSTITES OF PROSTATICS.

ALEXANDER (*Journal of Cutaneous and Genito-Urinary Diseases*, Volume XI, Number CXXVII) states that in an inflamed bladder sensibility is increased both as to tension and to contact. Wherever there is a hyperemia or a congestion of the bladder-wall, an injection beyond its capacity causes a painful and violent desire to pass water. The intravesical injections may do harm by increasing local congestion of the parts. An injection which causes pain or produces a desire to pass water, by distending the bladder increases the inflammation, and this is especially true when the injections are repeated frequently. Hence it may be stated as a general principle that in any of the cystites where the tension sensibility of the bladder is very acute and the capacity of the bladder greatly diminished, intravesical injections are absolutely contraindicated. Although the normal bladder has little contact sensibility, its reaction to irritating fluids is very marked, and is intensified in nearly all cases of cystitis; strong injections, therefore, such as the bichloride of mercury solution, may increase the inflammation by causing congestion. The vesical spasm, which sometimes remains after injection, should be regarded as a contra-indication. The use of soothing injections, and of those intended to produce a local anesthesia of the bladder, though general, is based, however, on a false idea of physiology. The drugs commonly employed are cocaine and opium in some of its forms. Under no circumstances should such injections be used in the cystites of prostatics as a mode of treatment, for the pain in these cases is not due to the contact of the urine, but to an increase in the tension sensibility of the bladder, and the same is true in regard to micturition. To anesthetize the inner surface of the bladder, therefore, has no effect upon the pain or frequency.

The treatment *par excellence* for ammoniacal decomposition is the dilution of the urine. The ingestion of large quantities of fluids is indicated in these cases; the internal administration of antiseptics, such as naphthalin and the oil of wintergreen, is also recommended. Pus in the urine will also occasion incontinence if the entrance of microbes into the bladder is prevented, or irrigation of the urethra and simple evacuation.

Taylor agreed with Alexander that the habitual use of cocaine in the treatment of the bladder is highly injurious, and called attention to the fact that even though copious injections seem to irritate, much good could be accomplished by employing only small quantities of antiseptic solution.—*Therapeutic Gazette.*

THE ANATOMY OF THE CECUM AND VERMIFORM APPENDIX, AND ITS RELATION TO APPENDICITIS.

Turner has made a careful study of the regional anatomy of the cecum and vermiform appendix upon the cecum, with the following results:

In eighty-three instances in which the appendix lay freely in the abdominal cavity its position was as follows:

In fifty-one it hung down into the lesser pelvis.

In twenty it passed transversely over the psoas toward the sacral promontory.

In six it lay freely on the iliacus or psoas.

In two it passed upward along the lateral surface of the ascending colon.

In three it lay in the meso-gastric region, the commencement of the colon being located transversely.

In one it lay in front of the sigmoid flexure, upon the right side.

In twenty-two cases in which the appendix lay behind the first portion of the colon, between this and the posterior abdominal wall, its relative position was as follows:

In four it lay curled up behind the ileo-cecal junction.

In five it lay directly behind the cecum.

In six it passed *intra-peritoneally* along the posterior or postero-median surface of the colon.

In two it passed in the same direction *extra-peritoneally.*

In four it passed in the same direction, but partly *extra-peritoneally.*

In one the fundus of the cecum turned upward and backward, the appendix lying behind it.

After discussing the influence which these varieties of location have upon the clinical course of appendicitis he draws the following conclusions:

(1) The cecum is the initial portion of the colon, and is always covered by peritoneum, posteriorly as well as anteriorly. (2) The vermiform appendix corresponds to the cecum of animals from the point of view of the comparative anatomist, but has no physiological importance in man, undergoing in the course of its growth, several changes, the results of which are apparent late in life. The anomalies of its location can be explained upon embryological grounds. An especially frequent anomaly is the location behind the cecum. (3) Inflamma-

tory processes in the region of the cecum originate almost exclusively from the appendix. The higher mortality in childhood and young adult life is due to the fact that the communication with the cecum is wider. The velum of Gerlach, if in existence at all, takes a very small part in the closure of the lumen at its point of attachment. (4) So-called "perityphlitis" is a circumscribed peritonitis originating from the appendix. Resulting abscess cavity from appendicitis lies intra-peritoneally. (5) "Paratyphlitis" is to be considered as a complication in the shape of a phlegmonous inflammation arising from an appendicitis, in which a perforation of the appendix takes place in those instances in which the latter lies behind the cecum and extra-peritoneally. Here, likewise, the cecum, itself takes no part etiologically. (6) Circumscribed suppuration in the occasionally existing pouches of peritoneum behind the cecum may simulate a paratyphlitis, but do not show any tendency to spread in the connective tissue from the beginning. On the other hand, many of the suppurative processes in the cellular tissue of the lumbar region, such as suprarenic and paranephritic abscesses, etc., may be traced to affections of the appendix. (7) In the diagnosis of the appendicitis an examination of the lumbar region, as well as of the rectum, is indispensable. (8) Exploratory puncture is not only dangerous in itself, but may lead to error.—*Chirurgitchesky Vestnik*, 1892, March and May.—*Annals of Surgery.*

GYNECOLOGY.

A NEW AND RAPID METHOD OF REMOVING THE UTERUS.

At a recent meeting of the Kansas City academy of medicine, Dr. Emory Lanphear presented a number of fibroid tumors, sarcomata, etc., removed by a new method of abdominal hysterectomy. The abdomen and vagina having been carefully sterilized, he makes an incision in the median line terminating as close to the pubes as possible, draws the uterus with one tube and ovary to one side, and applies a clamp to the broad ligament; a strong ligature is passed a half inch away from this, including the blood-vessels, and tied; the intervening tissue is then cut with scissors. Upon the opposite side the same procedure is carried out. When done, the uterus (hitherto held down by the broad ligament) can be lifted up into the wound and separation from bladder and rectum easily accomplished; these incisions, before and behind, are carried into the vagina, when a Kelly's or Polk's clamp is introduced through the vagina as close as possible to the uterus, its points reaching the ligature already tied in the broad ligament. As soon as properly applied it is closed and its fellow-clamp inserted upon the other side, when the uterus is quickly cut away with curved scissors. The pelvis is irrigated and the abdominal wound closed and drainage made through the vagina, as in cases of vaginal hysterectomy. The clamps are removed in forty-eight hours. The operation can be done in twenty-five to thirty minutes, being much easier than even vaginal hysterectomy with clamps. By the rapidity allowed and by the good drainage secured, Dr. Lanphear thinks this operation can be done almost as safely as an ovariotomy—certainly as safely as a vaginal hysterectomy; and it is much preferable to any method which leaves a pedicle or stump behind. He finds it is not necessary to unite the bladder to the rectum, as union takes place just as quickly without sutures as with them.—*New York Medical Record.*

NATIVE AFRICAN CHILD-MARRIAGE AND UTERINE DISEASE.

In an article published in the *Journal of the American Medical Association*, Dr. Nassau combats the common impression that maternity is easy among nations uncivilized, and consequently untrammeled by the restrictions of fashion and conventionality. At any rate it does not apply to the tribes of Western Equatorial Africa. An acquaintance, based on a residence there of over thirty years, with native African customs and habits, has made it apparent to him that the sexual life of the native women is marred, maternity made painful and often fatal, and diseases entailed that make their lives a burden. He has observed the following facts, which are fruitful sources of uterine disease and difficult parturition.

(1) Women are taken in marriage at too early an age. Sexual connection is commonly had before the age of puberty. Under the polygamous custom of the country, little girls, even in infancy, are bargained for with their parents by suitors, each running a race, trying who shall first complete the sum of money demanded by the parents as dowry. That sum given, the successful suitor has a right at once to take the child to his own village, and add her as "little wife" to his harem.

(2) There is no compatibility of age or temper. The girl's consent was not asked while the money negotiations were being carried on for her—a child in her mother's arms. There is no tender courtship, no gentle deference of a lover. Her owner's rôle is that of a teacher or master, whose eye is always that of a jealous inspector. And the child responds with the trickery of a pupil, and the subterfuges of a slave. It is impossible that there should be conjugal affection or connubial happiness. Her own wishes and preferences are elsewhere. She clandestinely gratifies them. Her sexual life, therefore, really goes on under polyandry: the combined (enforced) association with her owner, the (preferred) association with her chosen secret lover, and the (required) connection with her owner's guests. This latter is a part of native African hospitality. The chief furnishes his guests (black and white) with food by day, and a bed and female companion at night. It is a custom of the country.

(3) Even when the young wife has become pregnant, the chances are against her babe's safe delivery. The probabilities are large that there will be miscarriage.

(4) It is true that the prospect of maternity is welcomed by the young wives; for the women all cherish their babes affectionately (that is the only lasting affection that enters their lives); and they are given by their owners better position, in recognition of their having increased his importance as a father. The prospect is welcomed also by the woman's female relatives; for they also are to share in the increased honor of the family. But their preparations for the event are wearying, harassing, and often injurious. The young expectant mother is vexed with innumerable superstitions and prohibitions of what she must not do or eat.

(5) Actual parturition is met with very unskillful treatment, which often amounts to shockingly barbarous interference.

The author, who, in addition to being a physician, is also a missionary, observed the following pathological states as the most common results of African child-marriage: (1) Rupture in genital region, either from the little mother's bodily structures being not fully developed, or from outside force used in aid of parturition. (2) Displacements of the uterus. (3) Sterility. (4) Ovarian tumors. (5) Uterine ulcers. (6) Dysmenorrhea and menorrhagia. (7) Premature loss of good looks, and early appearance of haggard old age.

With such unimpeachable testimony before us, the civilized woman's lot in the matter of parturition can no longer be regarded as immeasurably inferior to that of her savage sister. It ought to be a comforting reflection to her that she does not after all pay so very dearly for some of the privileges of her station. A return to the "simple life" of primitive tribes need not, therefore, be preached at her by censorious moralists.—*New York Medical Record.*

A CONTRIBUTION TO THE PATHOLOGY OF THE FOURCHETTE.

To my knowledge the fourchette has no written pathology. At least nothing of it can be found in the many text-books I have examined. Still, after my attention had been called to this apparently innocent structure by an experience I will relate directly, I do not doubt that there exists such a pathology, and that its neglect may occasionally cause not a small amount of annoyance.

As the family physician of a newly married couple, I had to listen uncomfortably often to the sad story of the husband, who complained that copulation, executed even with the greatest tenderness, was a real torture to his wife, and that she lived in constant horror of being sexually approached. It was explained to me that the trouble was entirely with the insertion of the penis, which was in no way abnormal; that after that part of the act was performed, everything else was quite satisfactory. The existence of all and any of the known impediments and obstacles could readily be excluded, and as an examination was not granted, all kinds of random advise was given and followed out, in vain. She soon became pregnant, though, and as the trouble grew worse, she at last consented to an inspection of her genitals. This, however, left me as wise as before. There was an unusual amount of vaginal sponginess and secretory activity, but this evidently did not account for the experienced difficulty. The examination was very painful. Under the general diagnosis of a hyperesthesia, emollient and astringent washes were ordered, but no improvement followed. Not better fared another physician who was consulted shortly afterwards. In due time the lady made her first obstetrical campaign. The usual examination was again extremely painful, but it revealed perfectly normal conditions. It was a very slow affair, and when at last the head was cutting through, a revelation dawned upon my mind. An extraordinarily large frenum was like a rubber cap spread over the child's head. Evidently a rent was unavoidable. I felt very much like incising the fourchette, but from certain reasons I preferred to leave the work to nature, which did it in a most accurate manner, leaving out the musculature. Recovery was prompt, and further matrimonial life of the couple was one of happiness and satisfaction. The husband, to whom the whole matter was afterwards explained, gave such a graphic description of the experienced ordeals, that no reasonable doubt about the correctness of my assumption could be entertained. The abnormally large fourchette, a formation that properly may be termed a "megalofrenum," was the cause of the difficulty. The penis got caught in it, as it were, and had to overcome the impediment by random manipulation before it could enter the vagina. The frequent insults rendered the fourchette morbidly sensitive and caused a low form of inflammation, if not cracks and fissures.

After once my attention had been called to this matter, I tried to recall such instances of my former practice as could bear on it, and also did I keep the following year a close watch over the structure in question. The outcome of all this makes me believe that not enough stress has been laid on this seemingly trifling subject. I ask you, therefore, gentlemen, to help me in establishing the just claims of pathological significance to the interesting little fold.

That the size of it varies in different individuals may be accepted as a matter of course. The difference is quite remarkable. As an average the middle line of a stretched frenum in the aparous is about one inch in length. In some instances, though, it is two inches, and in others a half inch and less. The smallest I encountered in a girl where there was a general rudimentary condition of the genital organs. I do not doubt that every physician has his experience with megalofrenum. He meets it especially in inserting the Sims speculum. He then has to pull and hook the fold down before he can get the beak into the vagina, a procedure, which as a rule, is very painful. In the parous woman nature mends the trouble by tearing or stretching the fourchette sufficiently to be out of the way. Under aggravated circumstances, therefore, the so-called perineal rent of the first degree is not only unavoidable, but desirable.

Another, in my opinion, very common observation is a great tenderness of the fourchette, even in the virgin. It seems to have a natural sensitiveness in common with all similar structures, like the penal or lingual frenulum. As a rule, it may be stated that the posterior commissure is the most sensitive part of the female genital system. I do not doubt that many a case of dyspareunia up to a full-fleged vaginismus may be due to a hyperesthesia of the fourchette, especially when cracks, fissures and ulcers result. Considering what intolerable pains an anal fissure causes, and how it sets into action a most intense reflex spasm of the neighboring muscles, it seems to me obvious that a similar complex of symptoms may follow the identical lesion of the fourchette. I have not yet had the opportunity to examine a case in this new light. I can, therefore, offer histories, but my explanation appears to me so plausible that I expect a confirmation of it, by one or another of you in the near future.

I recollect, however, two well observed cases of intensely painful and stubborn ulcers in the posterior commissure. They both occurred in the first pregnancy of the victims. I think the etiology of such ulcers is now plain. They were originally cracks, which by some kind of infection began to ulcerate. The irritation is kept up by the vaginal discharges, as well as by continued cohabitation, and thus resists every kind of treatment, until the same operation is performed by nature in childbed we are used to perform in anal fissure by the knife.

Aside from the enumerated pathological conditions, I can understand how a megalofrenum may form an impediment to vaginal drainage, and how a catarrhal condition from retention of the uterine and vaginal secretion may be the consequence.

It remains to say a few words about treatment. In mild cases of hyperesthesia or irritation, applications of cocaine, belladonna, or of antiseptic washes will suffice. But it is evident that in more serious cases the sovereign remedy will be a division, a cut through the middle line of the fold. A mere stretching may, of course, occasionally do, and perhaps some of the cases of vaginismus reported as cured by dilatation, were relieved in such a way. Still it seems to me cleaner, simpler and more surgical to make a direct attack upon the real cause. If ulcers or fissures are present, the time-honored treatment of cutting right through them is still more indicated. Excision of the fourchette will hardly ever be called for, except there should be a general thickening or extensive ulcerations.

Another inference to be drawn from my views is that stitching of a simple rent through the fourchette in childbirth may be very unwise. As much as I favor a primary suture of every deeper perineal rent, so much will I hereafter leave these harmless tears to themselves—B. E. Hadrá, in *American Gynecological Journal.*

CASE OF AN EXTRA-UTERINE FETUS SUCCESSFULLY EXTRACTED BY THE OPERATION OF LITHOTOMY.

In the month of October, 1807, Mrs. Coleman, of Braintree, found herself in a state of pregnancy, attended with uncommon distress and some pungant pains shooting from the hypogastric to the epigastric regions. She continued that way until the latter part of the ensuing spring, when she had all the symptoms of a true travail. She sent immediately for an accoucheur, who not being able to come at the child by the natural passage, ordered doses of opium, with the injunction to repeat them as often as the pangs recurred. A fortnight after that the pain abated—the time when I suppose the child died in the abdomen. She was for two months afterward very much troubled by a disagreeable sensation, which she called drawing. The abdomen swelled to a very large size, which after sometime gradually subsided. The three succeeding years she passed without much apparent distress, but at the end of that time she began to experience very acute pains, attended with profuse evacuations by the urethra of a matter sometimes of a yellow cast, sometimes bloody and of a very fetid smell, and voided in the same time by the same canal some very small bones. A communication also took place between the bladder and the rectum so as to let the feces and urine pass either way. During five years before my first visit to her she experienced the most excruciating pain night and day. Having been informed of my recent arrival from Martinico with my family, and that I resided in Higham, she sent for me May 20, 1816. I visited her the same day, and after a critical examination found the child in the bladder, crusted over with a calculous matter. Considering her in a dangerous situation I advised her to submit to the operation of lithotomy as the only means of relieving her of her sufferings. She readily consented to it and the operation was performed by me June 17, 1816, attended by Drs. Noah Fifield, of Weymouth, and Robert Thaxter, of Dorchester, two respectable members of the medical society, in whose presence one hundred and forty-six bones of a fetus, about seven months old, were extracted, together with a stone about the bigness of an olive. She has since entirely recovered and enjoys at present a perfect state of health without any pain whatever, but the communication between the bladder and rectum is not wholly obliterated.

THERAPEUTICS.

WHAT IS THE VALUE OF THE SALICYLATES IN RHEUMATISM?

Many members of the profession will at once answer the question which heads this editorial in favor of salicylates. Yet there are others, who are able to quote large statistics and wide clinical experience, who will state that they believe that the general confidence in the value of the salicylates in acute articular rheumatism is not justified by the results which are obtained from its administration.

Probably the correct solution of this mooted point lies in the subdivision of the action of salicylates on the various parts of the body. Under such circumstances there is no doubt that the universal experience has been that salicylic acid or its salts produces a subsidence of the pain and swelling in the joints which are affected by acute articular rheumatism, and that this result may be accomplished after but three or four doses, or certainly by the third or fourth day. On the other hand, the collective investigation committee of the British medical association found that the average duration of pain was a little over ten days, while a collection made from the cases treated in the London hospital barely exceeded five days. Be this as it may, the results of both these investigations, which aggregated something like twelve hundred cases, showed that the drugs caused an amelioration of the joint-symptoms. Similarly, salicylic acid produces reduction of the fever, and in many instances the febrile process, under its influence, only persists for two or three days. On the other hand, it must be remembered that every now and then we meet with cases in which the joint-symptoms and the fever resists all doses of the salicylates which we may give within the limits of safety.

So far, then, we may consider that on general principles two of the important symptoms of acute articular rheumatism are relieved.

On the other hand, there are certain complications which are so frequent and occur so early that they may be considered as symptoms or a distinct part of the disease in which salicylic acid probably effects but little, namely, the appearance of cardiac manifestations of the action of the rheumatic poison. Of course it is true that salicylic acid, by shortening an attack of rheumatism, in that way indirectly protects the heart; but, at the same time, there is no evidence that it protects this organ from the actual presence of the disease process. In other words, it may prevent cardiac disease indirectly, but its administration in no way preserves the cardiac apparatus intact while the febrile symptoms last. This has been pointed out in a number of the standard works on medicine, and should be universally recognized by the profession, even though all its members may not be willing to admit that the statement is entirely true. Thus, in Stewart's article in the "System of Therapeutics," he points out that Hood, of London, in the treatment of twenty-two hundred cases of acute articular rheumatism appearing in both sexes under thirty-six years of age, noticed that there were a very large number of instances in which cardiac disease was produced. Thus, of eight hundred and twenty-eight cases treated without salicylates, five hundred had cardiac disease, whereas in three hundred and twenty-eight cases treated with salicylates, one hundred and ninety had cardiac disease; or, again, of three hundred and sixty cases treated with salicylates, two hundred and forty-one had complications, and in another series three hundred and sixteen suffered from cardiac disease out of a total of five hundred and fifteen. In other words, in all cases treated by salicylates the aggregate of cardiac complications was somewhat over sixty per cent., while those who were treated by other measures had cardiac complications in a little less than sixty per cent. It is, therefore, evident that the salicylic compounds are no more effective in avoiding these unfortunate manifestations of the rheumatic poison than are the various other modes of treatment. This point is emphasized, too, by the fact that the percentage of cardiac disease in cases treated by the salicylates is about the general percentage of cases, namely, between fifty and sixty per cent. It is also true that relapses seem to occur more frequently under the salicylates than under the older methods of treatment; perhaps because, when the older methods are used, the disease runs its course, or, as it were, exhausts itself, whereas the salicylates may alter its course before the system is thoroughly rid of the rheumatic poison.

To quote Stewart again: "Garrett has shown that the salicylates seem to have more effect upon the hyperemic group of symptoms, as, for example, those manifested about a joint, than upon the fibrous symptoms, as, for example, those seen in endocarditis."

There are other points which might be discussed in regard to the value of salicylic acid in rheumatism, but these are, after all, the most important. In view of the recent studies of Haig and those of other investigators who have not been so thorough in their methods of research, we cannot doubt that this class of compounds, uniting with the uric acid, produce salicyluric acid, which is readily eliminated, and so directly or indirectly results in the amelioration of the rheumatic symptoms.

It is hardly in place in this editorial to consider the disadvantages which salicylates possess, so far as their untoward symptoms are concerned. That they are capable of producing disagreeable symptoms everyone knows, but they probably do not cause difficulties to arise any more frequently than other drugs possessing medicinal power of great value. There are instances of very severe symptoms, but, after all, these have been few and far between. Perhaps the most noteworthy of these was the case reported within the last few years in the *London Practitioner*, where the use of what might be called a very moderate dose of the salicylates produced petechial eruption and retinal hemorrhages, which latter resulted not only in temporary, but permanent blindness.

There are but two points in regard to the use of salicylates in rheumatism which, we think, should be particularly emphasized, and these are, (1) that the physician, after once deciding to administer these remedies, should give them in large doses or not at all, that is, to use no less than forty to eighty grains a day; (2) that if, after administering the drugs in this way, no amelioration of the symptoms of any note has occurred at the end of four or five days, that it is useless to continue this line of treatment, as little good will be exercised over the rheumatic process, and much harm will be done by saturating the patient with such irritants to the kidneys and stomach as are the class of the salicylates.—*Therapeutic Gazette.*

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

THE CAUSATION OF SEX.*

By J. V. BECELAERE, M. D., Detroit, Michigan.

In a theoretical manner, at least, if not from actual experience, we all know something about "propagation of species." Evidently the preface, or introductory part is, of all, the most interesting to the average reader of nature's book on "Pregnancy." Despite, however, a pretty fair knowledge of the plot, the intricacies, the complications, and the final outcome of the story, we still find some pages,—nay, chapters, which inviting closer investigation, will bear a more thorough study; while some others, forsooth, we know nothing about. Who can state, for instance, the actual conditions, the "when, where and wherefore" of impregnation? Who can outline the actual cause of *amenorrhea gravidarum*, a condition obtaining from the very first, and before any one could reasonably charge the still microscopical embryo with being an obstructionist? Who can tell in what manner individual, specific life, in impregnated ova, replaces the organic and purely vegetative vitality of the ovular cell? Who could even determine to a certainty what is going to be the sex of the full term—as yet unborn—fetus, whether male or female or neither? And yet, it is a by no means unknown fact, that a two months' embryo has practically made up its mind as to whether, in after life, to run for president or to modestly join a women's christian temperance union.

I for one have been, of late, giving this subject some little attention, and propose to-night, with your kind forbearance, to review the various theories excogitated with a purpose of accounting for sex.

For the sake of convenience we may class these all under three headings: (1) the ovular, (2) the spermatic, and (3) the extraneous theories.

(1) Theories coming under the first group consider the ovule as being directly

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responsible for the causation of sex:—(a) On account of its *greater or less maturity*, the sex of the resulting fetus depending on the time of impregnation. If this take place in the immediate vicinity of ovulation the ultimate result will be a boy, while a later impregnation would produce a girl. Most breeders and stock-farmers rely on this theory which has, indeed, but rarely disappointed. (b) Another theory lends a determining influence in sexual evolution to the *anatomical origin of the ovule*, the right ovary giving rise to male germs, the left, however, sporting ovules of the female persuasion. This, of course, is rank nonsense: how often do we not, in these days of conservative oöphorectomy, hear of one-sided mothers bearing male offspring as well as female?

(2) Theories coming into what might conveniently be called the spermatic group, lay capital importance to the male element, the spermatozoid. Some authors hold,—and I believe Aristotle was the originator of this heresy—that the *individual testicle furnishing the spermatozoid was responsible for the sex of the child:* the one on the right secreting boys, that on the left, girls. How is it then, that lop-sided individuals do sport male and female offspring? Some wicked Frenchman might, of course, allude to arbitration, or variegated parentage, but we all know such things only happen on the Continent.

(3) Among the outside influences, on the supposed importance of which are based what might be termed the group of extraneous theories we number:—(a) The *time or hour of the day:* insemination taking place in the evening would, if successful, give rise to a male fetus, while he, seeking the connubial couch "in the wee sma' hours," would only succeed in securing a girl. It is held by the author of this theory that prolonged retention of semen within the female organs does account for the masculine offspring. On what grounds, has not been explained. Microscopical investigations have established beyond any doubt that only one spermatozoid is admitted through the ovular micropyle, so that we must forego the idea of numerical impregnation and even of quantitative impregnation as far as concerns the amount of male pronuclear substance uniting with the female pronucleus. The theory of prolonged retention of semen allowing a more efficient impregnation does not explain how boys more often result from cursory connection, while a two days' stay in bed after artificial impregnation, securing complete retention of semen, often tends to produce a girl.

On the other hand competent observers hold that women, as a class, are more prone to sexual indulgence after a day's work than after a night's rest. If this be the case we should have to forego the consideration of time and look for a possible explanation of sex to the theory of more or less passionate progenitors, which I propose to consider later on.

They are by no means all *savage* tribes who believe that Luna, "the mysterious goddess of night," has a preponderating influence over the sex of the fetus. If this really were the case, all people born within the same fortnight or at least within the same week ought to be of the same sex. How, then, about *twins*, so frequently turning out "pair and odd," and which evidently were conceived under identical astral influences?

Indirectly sex has been ascribed to the ovule or spermatozoid by authors holding, for instance, that either the father or mother, from being momentarily more passionate, may continue the converse sex. This is another suggestion without any physiological foundation. Pregnancy, following insemination, is the result of the meeting and intimate admixture of male and female pronuclei, *preëxisting at the time of intercourse*, and ready for combination ever before the passionate feeling culminated into the final and irretrievable orgasm.

Still another, this time more fortunate, speculation, indirectly traces the causation of sex to the spermatozoid or ovum, inasmuch as *either of the parents may be physiologically predominating* at the time, not of insemination, but of secreting the procreative elements. To put it in an aphoristic manner I might say that according to this theory "*sex is the complement of physical insufficiency.*" Take for instance a father whose physiological equation we may figure by one hundred, and the mother, the condition of which might be noted, say by eighty, the tendency is to complete the female quotum and bring it up to *par*, and conversely: father seventy, mother ninety—tendency to male offspring. The state of physiological superiority may be of limited duration, extending only, for instance, over a short period of sickness of the other factor. It is therefore by no means impossible that by such a trivial circumstance as a "cold in the head" the great NAPOLEON came by a "King of Rome" instead of an every day regulation princess.

However, when a considerable disparity of age, or state of chronic invalidism tends to perpetuate a physiological insufficiency of either parent, tendencies are markedly towards producing only one line of children—girls or boys, according to which is the superior procreating individual the father or the mother.

One more theory which is very plausible ascribes the sex of children, *cæteris paribus*, to the physiological condition of the mother during the earlier weeks of pregnancy. To my father, D. V. BECELAERE, LL. D., whom European bee-keepers considered an authority on apiculture, I am indebted for the following facts. When for some reason or other, a hive has lost its queen-bee, the neutral or imperfectly developed female working bees, which go to make the bulk of the swarm, immediately select one of the younger larvæ, forthwith altering the dimensions of the cell in which it awaited complete maturation. The corresponding alveolus, increased two or three fold, allows for unstinted growth and complete development. Furthermore, the would-be queen receives a different kind of food from that which the thrifty workers are supplied with, whereby after due time the plebeian larva wakes to queenly consciousness and responsibilities. We here find an instance of what more favorable conditions in the earlier stages of development may do for the individual under consideration. From what might have become a plain, barren, imperfect female, denied the pleasure of motherhood, and if taxed to the utmost laying but a score of virgin eggs, always evoluting into drones or male insects, a change in food and lodgings will make a full-fledged perfect queen, capable of acting her part in the "sexual symphony" and laying a trifle over one thousand eggs a day, or from thirty-six thousand to forty thousand in a season,—all this from one insemination! What seems yet more astonishing, the queen-bee lives a whole lifetime, laying at will both male and female eggs throughout several seasons, without ever needing further insemination, the spermatic elements being actually stored away, and dispensed according to requirement. How fortunate that we, as a race, are built after another plan! And yet, according to the last named theory, one thing seems to be held in common between the infant bee and the human embryo, and that is the possibility of a different evolution according to a change in conditions existing in early life.

If we try to generalize from these theories we find that after public calamities, such as war, famine, epidemics, and so forth, the general tendency in childbirth is towards a more generous representation of the male element. The reason for this has not been positively set forth, yet we might *a priori* suppose that the male population having suffered more from existing hardship,—especially in case of war,—they are for a time being in a state of physiological inferiority, which is productive of male offspring. The same holds good for savage tribes: here boys are at a discount, evidently because the peripatetic buck undergoes more hardship than his hard-worked but yet home-staying squaw.

Civilization, inducing wealth, ease and comfort is productive of girls. Habits are more sedentary, fathers effeminate,—at least if compared to the hardy pioneer,—or absorbed in the pursuit of pleasure or the carking cares of business; mothers are highly neurotic as a rule, indolent always, and between them the weakened progenitors have girls—when they succeed in having anything at all.

Sex is evidently the result of much more complex factors than a mere question of time or atmospheric vicissitudes, and yet I wish to call your attention to one condition which has universally been overlooked, and which nevertheless, in my estimation at least, plays an all-important rôle in the causation of sex.

Up to date every one attempting an explanation has neglected to put a proper estimate upon the influence of the spermatozoid *per se;* at any rate I have discovered no record to the contrary. The common idea prevails that the spermatic element acts in the manner of a match touching off a rocket, and has no further mission. I think, however, that a vastly greater importance has to be allowed the male element than has been usual heretofore.

To my idea the *greater maturation* of the spermatic fluid and consequently *of the spermatozoid* plays an all-important rôle in the causation of sex. I contend that if insemination takes place soon after the male elements are at all capable of vivifying an ovum—since we all know that not every spermatozoid is capable of impregnating,—the general tendency of the ovum will be towards evolution after the female plan, whereas if spermatozoids be retained within the male organs, there to undergo more complete maturation, and turned loose only when they have attained, so to speak, their adult condition, they will—provided, of course, an ovule obtain capable of impregnation—invariably determine the formation of a male fetus.

To sum up, my recipe for a boy would be somewhat after this plan: Select a healthy woman in good physiological condition; feed her well and on exciting food; allow her no fatigue nor mental worry; let the husband for a time previous to his intervention engage in some rather fatiguing pursuits; allow him less sleep and more scanty food than usual, so as to reduce him to a condition of relative physiological insufficiency; let the husband strictly refrain from all sexual gratification for at least a fortnight previous to the woman's menstruation; allow intercourse only once, and when thirty-six hours have elapsed after the cessation of the flow; above all forbid any duplicating, strict continence to follow for the next forty days; keep the mother in good condition throughout pregnancy but more so during the two first months, and if after all they have a girl, I should recommend repetition of the foregoing method.

REPORT OF A CASE OF ABDOMINAL ABSCESS.*

By GEO. W. MORAN, M. D., Detroit, Michigan.

On December 27, 1892, I was called to see Edna G., aged eight years, who had been suffering for two days with acute gastric catarrh, resulting, as far as I could learn, from the ingestion of a large amount of candy, fruit-cake, et cetera, on Christmas day. At this time she had a temperature of 102.5°, with a full strong pulse of 120 per minute. There was tenderness only in the epigastric region; bowels slightly constipated, and urine normal in quality and quantity. Under the ordinary method of treatment the gastric irritation was quickly allayed, temperature returned to normal in less than two days, bowels became regular and appetite good.

On January 4, I was called again to see the patient who at this time was complaining of a slight, continuous pain in the left lumbar region, and which was not complained of during my previous visits. On closely questioning the patient's mother it was learned, rather indefinitely, however, that the child had received a light blow in that region from a brother while at play, on December 18, and up to the time the gastric irritation set in had occasionally complained of the pain. After thoroughly examining the parts, I left some directions, with the understanding that I was to be called if the pain did not soon abate. On the sixth day following I was called again to find the child suffering with the same pain, which at this time was not continuous but intermittent, the intervals between the attacks being of variable length, sometimes nearly twenty-four hours, but when the pain was present it was a little more severe than at my previous visit, yet the patient was able to be up and around. Temperature 99.1°, bowels somewhat constipated, appetite good, but sleep interrupted.

Suspecting an abscess, I again examined the parts thoroughly but was unable to get fluctuation or find anything, outside of the pain and slight rise in temperature, that indicated an abscess formation. I ordered a mild laxative to be given and a somewhat restricted diet for a few days and watched the effects. It was observed that when the bowels moved freely the pain was hardly noticeable. I was called again on the 15th, five days after the previous call, and found her appetite poor; very weak; bowels irregular; urine scanty and high colored; heart's action, weak. The pain was limited entirely to the old point in the left lumbar region. Temperature, 99.2°; pulse, 120, and not very strong; the abdomen intensely swollen; the percussion note dull over most of its area, and the wave of fluctuation was plainly felt. From the physical signs and the few constitutional symptoms present I was led to believe the enlargement to be due to ascites, and a heart stimulant, diuretics, and a cathartic were given in the hope of diminishing the ascitic fluid. Two days passed, however, without any progress in the desired direction, her temperature remaining the same, with the heart's action somewhat improved, bowels regular, but appetite remained poor, and the patient was much weaker.

On Saturday, January 18, Dr. Jennings saw the case with me. After a careful examination it was decided that the enlargement was due to an intra-peritoneal accumulation of pus, although the clinical history did not conform to this diagnosis. It seemed impossible for either suppurative or tubercular peritonitis to be present on account of: (1) the grave nature of suppurative peritonitis, the local and constitutional symptoms which you are all acquainted with, and (2) the insidious onset of tubercular peritonitis and the fact that it is often associated with the corresponding disease of the lungs or intestinal mucous membrane, or both. Again an extra-peritoneal abscess, as a result of the traumatism, seemed possible, but from the enormous size of the cavity containing the fluid it was considered quite improbable.

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*Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

An exploratory operation was decided upon to determine the true nature of the fluid and if possible get at the cause. On Sunday, January 19, the patient was chloroformed and an incision made in the median line about two inches below the umbilicus which at once showed the swelling to be due to pus. Everything being in readiness for opening the abdomen the incision was enlarged when the pus welled out in an astonishing quantity. Much to our surprise and pleasure we soon learned that the peritoneal cavity had not been invaded by the pus, but that the entire quantity (which was believed to be at least four quarts) was lying between the peritoneum and the abdominal wall. This enormous pus cavity occupied the whole of the anterior and the lateral abdominal areas. The cavity was washed out with boiled water, a drainage tube inserted into the most dependent part at the left of the bladder, and the ordinary dressing applied. After the operation the wound was dressed once a day, using as washes first boiled water and then a dilute solution of listerine, each time shortening the drainage tube, and as an occasional sac would be cut off from the main cavity it was opened with a probe. The whole cavity healed kindly, the temperature never rising above 99.4°, and the pulse gradually dropped to normal. Upon removal of the pus the pain in the left side disappeared and did not return.

There are a few points to which I wish to call your attention: (1) The rapidity of the pus formation. (2) The location of the abscess. (3) The apparently small amount of inflammation present; and lastly, the intermittent character of the pain. Five days previous to the time I found the enormous enlargement I examined the abdomen very carefully for a pus formation which I feared the inflammation producing the pain would result in, but was unable to find any, nor was the abdomen in any part enlarged. The spleen and liver seemed normal in size, urine scanty in amount but practically normal as to its other constituents. The pus was not offensive, but was turbid in character and contained many flocculi.

Three weeks after the abdominal incision and cavity had healed I was called to see her on account of a third attack of vomiting and a severe cutting pain situated just above and a little to the right of the umbilicus, accompanied by rise of temperature, and limited to an area not larger than a square inch, the entire area covering the stomach not being tender in the slightest degree. The tongue was perfectly clean and the breath inoffensive. On account of the severity of the last attack the parents feared a repetition of her previous illness, but this, I am inclined to think, was what might be designated cyclical, fitful, or recurrent vomiting (KEATING) due to a depressed condition of the centers for the nerves supplying the stomach and liver, and which in all probability resulted from her previous illness. The stools were whitish in color but no jaundice present. For the vomiting and pain I gave her a teaspoonful of hot brandy every half hour and had a hot fomentation applied over the umbilicus which gave prompt relief.

I am exceedingly glad to say that the little girl has entirely recovered from her trouble. Her appetite is splendid, pulse strong, bowels regular, and she is rapidly regaining flesh and strength.

LECTURES.

DILATATION OF THE HEART.

BY PROFESSOR POTAIN, PARIS, FRANCE.
PHYSICIAN TO HOSPITAL DE LA CHARITÉ, PARIS; CLINICAL PROFESSOR.

GENTLEMEN: You saw in PIERRY ward, bed number two, a patient who complained of dyspeptic and pulmonary troubles. She is chlorotic and has respiratory difficulties. This is what she complains of mostly. However, you can only find on auscultation of the chest a slight weakening of the respiratory murmur at the base of the lungs. If, however, you examine the heart, you will find that its volume has increased greatly, while its beating is violent. You can clearly find the rythm of a *bruit de galop* at the point. Since she has been in the hospital these signs have improved by repose. What do these symptoms mean that she has not paid any attention to? Why they mean dilatation of the heart, which is very often not noticed when there is chlorosis. But being found in certain cases, and carrying with it symptoms that are peculiar to it, and a different medication according to the lesion, it demands our careful study.

You must learn that dilatation of the heart is a common thing in a number of affections. In chlorosis it is an accessory phenomenon. You are aware what a complex malady chlorosis is, and that it brings so much blood into the respiratory organs and the stomach, and why should it not on the heart?

We formerly held dilatation of the heart in great esteem, but since the lesions of the orifices have been so well studied it has lost a great part of its importance. Formerly we thought it a protopathic malady of the heart, and to-day, by a sort of reaction, it is regarded as a deoteropathic disease, added to the other more important lesions. But this is not entirely true, for dilatation of the heart may be an isolated lesion, and not be attached to any predisposing lesion. This is, of course, rare. We have seen, though, a goodly number of patients who, after some great emotion, fright, et cetera, or even contusion of the thorax and epigastric region, got a dilatation of the heart, which was sometimes permanent. It is caused by excessive effort, as in the patient who wished to show how strong he was and made a violent effort at lifting, when he was taken with palpitation and fainting. This was a temporary dilatation of the heart that rest cured. It is, above all, when effort has been continuous that dilatation takes place.

The American physicians, during the late secession war, and the Germans during their war, found over seventy cases in soldiers who had been subjected to prolonged fatigue. Emotion is important for some authors. CORVISART found during the French revolution many cases of dilatation of the heart. We do not wish to contradict this statement, but we think the symptom is a rare one in fright. It is found, however, in many maladies: those of the stomach, intestines, and liver, and even in spinal troubles such as tabes. It is also frequent in infectious diseases, typhoid fever in particular, and here it goes away with the first malady. The most interesting point about dilatation is to find out why these different maladies cause it. To understand this we must proceed by order.

Let us first of all consider the case of a simple modification of the walls of the heart which alters the tonicity of the heart muscle. When in repose it is all right, but if more effort is made the wall gives way and the heart dilates. The tonicity of the heart diminishes in all infectious maladies at first, later the walls are submitted to a functional modification and may have a real degeneration with an actual alteration of structure. The distention, under the action of the diastole, becomes more and more every day, and may become permanent. Dilatation of the heart can only be explained by the loss of tonicity of the cardiac muscle when it is nourished by blood that has lost its nutritive quality by some general disease. Such is the case in chlorosis. It can also be explained by the fact that degeneration will at last attack the arterial system, and the walls of the heart being poorly nourished, lose their tonicity and give way under the pressure of blood. In Bright's disease the hypertrophy is due to the augmentation of the volume of the heart's fibre, with their degeneration at the same time. After a time the degeneration overcomes the hypertrophy and the heart loses its energy, becomes weak, and dilates. To all these different causes we must add dilatation of the heart under the influence of the nervous system. You are aware that any perturbation of this system determines a suspension of the action of the pneumogastric and the heart is attacked with tachycardia. But it does not remain a functional trouble; it can continue to dilatation. This takes place particularly in the lesions of the brachial plexus of the left side.

We have seen, for instance, patients who have been amputated (left arm) and the stump had severe pains in it from inflammation of its nerves, and dilatation of the heart followed. When proper treatment took away the pain the dilatation ceased.

But the most frequent cause of dilatation is some obstacle to the circulation of the blood. This may be in the heart itself or in the peripheral system of circulation. Any orifice having insufficiency, or narrowing, will bring about dilatation in time. When the external or surface circulation loses its elasticity like in the sclerosis of Bright's disease, the heart is obliged to dilate itself to overcome the obstacle. It being no longer aided by the elastic walls of the arteries which form a real peripheral heart. Pulmonary emphysema is a malady that brings about dilatation. There is here an atrophy of the pulmonary capillaries and a diminution of the lesser circulation, making an obstacle in the right ventricle, and a hypertrophy. It is the same in intestinal and dyspeptic diseases, the capillary circulation is at fault. The capillaries contract in a spasmodic manner during digestion, and this brings on a dilatation of the cavities of the right side of the heart, which cannot be discovered by auscultation. This is temporary, as the heart goes back to its normal size as soon as digestion is over. But if it remains dilated the walls may give way. Finally, the heart may be dilated by too much influx of venous blood. This is seen in muscular exercise which determines an afflux of blood in the right ventricle. Formerly we thought that exercise brought about dilatation of the heart by an excess of arterial tension. This is possible by a quick, sudden effort, when the closing of the glottis compresses the aorta and the large vessels, whence an arrest of circulation and augmentation and tension, but this is not true for muscular exercise as a rule.

We have seen by experiments that we made on the Faisanderie gymnasts that the arterial tension was sometimes inferior and other times superior, during exercise and repose.

It did not vary from one to one and a half centimeters of mercury, which is by no means enough to cause dilatation of the heart. On the contrary, we saw that exercise could determine hypertrophy of the heart in these men. The surface of the heart is about ninety-one centimeters square in men, even in soldiers, while in gymnasts we found it ninety-nine. This is owing to exercise, as the more work they did the more the heart was increased in volume. A gymnast, who had been at it eight years, had one hundred and twenty-eight square centimeters of heart surface; another, only three months at exercise, had ninety-four. Between these two extremes, we found many of these hearts all above the normal. It is remarkable that the size increases quickly after exercise; in one case, a man who measured only eighty-one before working, was found to have one hundred and twenty-one after only fifteen minutes' exercise at the bar.

These functional dilatations finish by becoming permanent, and, yet, they go away if the exercise is given up. How can this be explained? Why, you know that the muscles put into motion all the more blood when there is a large number of them made use of in exercise. In repose the heart receives an equal quantity of blood to that that it expulses. It is not the same during exercise, when it receives an excess of blood and must dilate to take it in, and in these persons it becomes a permanently dilated organ. The mechanical results are that the heart becomes too large and heavy, giving a sensation of intra-thoracic weight, and a diminution of useful work is the result. This is bad for general and local nutrition. The hypertrophy that is the result acts as a relief for a time, but on account of the insufficiency of the nervous action, or of the muscular action of the heart, there is a weakness produced, and, as soon as the heart can no longer overcome the arterial pressure, the blood does not flow well, there is stasis, congestion and edema, when asystole follows.

The symptoms of dilatation are not clear. Many of those that CORVISART gave depend on the lesion that produces the trouble. Neither palpitation nor an exaggerated impulsion of the heart can be regarded as signs of cardiac dilatation. LENNEC gave a certain importance to the sounds of the heart heard at the lower end of the sternum, which he thought were clearer and more intense. He even established the degree of intensity according to the degree of dilatation, but it is by percussion that you can best establish the increase in the heart structure. The displacement of the point is an excellent sign. Normally it beats in the fourth or fifth intercostal space, and in the vertical direction of the nipple. In dilatation this is all changed according to the cavities that are attacked. When the left side of the heart is affected the point is carried to the right side of the body and downwards, and the contrary with the right cavity, when the heart goes to the left of the nipple. You must not make the mistake of supposing that where you find the maximum of cardiac impulsion that there is the point of the heart. It is true that exaggerated impulsion is a sign of dilatation, but we cannot introduce into the symptomatology of dilatation tricuspid insufficiency, which is a sign of considerable dilatation. PARROT thought that even small or medium dilatation would produce tricuspid insufficiency and its symptoms, but he also believed that the venous pulse was a pathognomonic state, when we know that it is found in chlorosis when there is not the slightest insufficiency of the tricuspid valve. Some writers have spoken of various "souffles" in dilatation, but there are *none at all*. It is even true that when they have existed dilatation makes them go away. CONSTANTIN PAUL has shown that we have only to make such patients hold their breath to get rid of any "souffle." The "bruit de galop," however, is a good sign of dilatation, for it is a consequence of the diminution of the tonicity of the heart. At the moment of diastole, the blood pushed by the auricle dilates suddenly, the ventricle. A shock is then heard that precedes the systole at the superior part of the heart, left or right, according to the cavity that is dilated.

As to prognosis.—Of itself we cannot well make a prognosis of dilatation of the heart, because it is not a disease, but only an element in some other trouble. However, if it has lasted for some time, it is serious as it contributes something that hastens the end.

Treatment.—The therapeutical indications vary according to the origin of the dilatation. If there is dyspepsia and chlorosis, then an alimentary regimen, well arranged, will be enough to clear up the condition. When it is the arterial circulation that is at fault, as in arterio-sclerosis, then iodides will influence the dilatation in an indirect manner. If the dilatation is due to valvular lesions you must apply the usual means for their treatment. If it is due to exaggerated muscular efforts, or to an alimentation that has had an excess of liquids in it, which brings about extra work of the heart muscles, then you must forbid all exercise, but you must be careful of anemia that will come from enforced repose. If the dilatation of the heart has brought about asystole or arythmia of the pulse, then give digitalis, if you are sure that the heart muscle is still in good condition. In that case the tonic action of the drug will act on the peripheral vessels and increase the tonicity, while it will diminish the stasis with the dilatation and favor circulation. But do not give digitalis if the heart is so much altered in structure; then it will only add to the difficulty and prevent circulation, while it will bring on cardiac insufficiency. It is a delicate point here that must needs have great attention. In any case when asystole and arythmia come on in old cases, when the heart is almost always degenerated, give only very small doses of digitalis, and watch the effects closely. If in doubt, give caffein only.

To sum up.—Dilatation of the heart is not a malady itself. It is only an element of diseases that attack different organs, and this is why we see it so often.

It is best diagnosticated by percussion, which will show an augmentation of the heart's surface. The displacement of the point and the "bruit de galop" are signs of value.

The treatment is mostly that of the cause that produced the dilatation of the heart.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, MAY 29, 1893.

THE PRESIDENT, FREDERICK W. MANN, M. D., IN THE CHAIR.

PRESENTATION OF PATIENTS AND SPECIMENS.

DR. DONALD MACLEAN: (1) This patient, twenty-six years old, had noticed a rapidly growing tumor of the left axilla some time ago. This tumor involved the muscles of the arm and elbow-joint. The arm was removed twelve days ago at the shoulder-joint, and the tumor was found to be a carcinoma. (2) This pathological specimen, the result of a resection of the elbow-joint, was removed from a woman who had no history of any injury to the joint but who had great pain in that locality and a gradually developing complete immobility of the joint. She was a healthy woman otherwise. You will notice that the articular surfaces are ulcerated and destroyed. I remember a parallel case in Harper hospital, the patient being a child, the knee-joint being implicated and necessitating the removal of the patella.

DR. H. O. WALKER presented the following specimens: (1) A piece of chewing gum removed from the bladder of a neurotic patient, aged seventeen years. The lithotrite was employed to do the work. (2) Some mats of hair removed from the bladder, probably a dermoid. (3) A tumor removed from the bladder of a man, fifty-four years old, by the suprapubic operation. His chief symptom was urinary incontinence and the occasional passing of blood.

DR. A. N. COLLINS: Did the man have any difficulty in passing his water?

DR. H. O. WALKER: No.

DR. E. T. TAPPEY: I wish to report this case: a young child having diphtheria in which tracheal symptoms suddenly intervened. Tracheotomy was performed and the child recovered.

DR. A. E. CARRIER read a paper entitled "An Unusual Effect of Arsenic."

DR. WM. M. DONALD: I have a patient the subject of chorea whom I am treating with large doses of arsenic and who has had frequent crops of furuncles.

DON M. CAMPBELL, M. D., Secretary.

STATED MEETING, JUNE 12, 1893.

THE PRESIDENT, FREDERICK W. MANN, M. D., IN THE CHAIR.

PRESENTATION OF PATIENTS.

DR. J. E. CLARK exhibited a patient who had a thoracic aneurism, of which particular vessel it was not possible to accurately determine.

DR. J. J. MULHERON: This is a case of aneurism, of which vessel I am not prepared to say. I would give potassium iodide and ergot to such a case together with an unfavorable prognosis.

DISCUSSION OF PAPERS.

DR. J. SAMSON, of Windsor, Ontario, read a paper entitled "What shall we do with our Typhoid Fever Cases."

Dr. J. J. Mulheron: I desire to thank **Dr. Samson** for the paper which he has given us. It is usually impossible to diagnose typhoid fever at the first visit as some practioners claim to do, and a correct diagnosis as early as possible is most important, but to be positive the temperature curve must be determined and that takes at least three days. The expectant plan of treatment is often efficacious. Calomel in the early stages given in conjunction with salol, both as intestinal antiseptics, are good remedies. Another important feature is early and efficient attention to the kidneys. The remedy I use is black coffee, a tablespoonful every three hours; it is a cardiac tonic and nerve stimulant. We cannot lay down any exact rules for the exhibition of stimulants. If the skin become dry after the exhibition of alcohol it should be discontinued. Beef tea is of no value as a food, but milk is very good and should always be peptonized. I do not agree with **Dr. Samson** in his remarks about quinine. I would give it in antipyretic doses. I would not give antipyrin because it depresses the heart.

Dr. J. E. Clark: Diagnosis is the important thing and I rely largely on the enteric symptoms to help me in making my diagnosis. We cannot diagnose these cases at one visit. Typho-malaria is a very convenient if not scientific term. My most successful treatment has been by the application of cold externally by means of sponging and ice-bags, using very little medication. Calomel I never use, but I still employ sulfonal in those cases presenting delirium and also salol as an antiseptic.

Dr. C. G. Jennings: **Dr. Samson** has given us some very valuable points over which to ponder. Pure malarial fever is rare, and the malarial complications are not typical. There is no such thing as typho-malarial fever. We do not, however, often have a typical typhoid presenting all the classical symptoms and among them the characteristic temperature common among cases apparently beginning suddenly. There are some cases which get well under large doses of quinine, and I think it is the proper thing to try that in the beginning, if we are in doubt as to the exact nature of the fever under consideration. I do not look upon quinine as an efficient antipyretic. I do not see how **Dr. Samson** has been able to keep the temperature below 103° without the exhibition of antipyretics and upon the expectant plan. I cannot do it even with the help of cold sponging and the cold-pack. In my hands the result of the cold bath has been so good that I do not see how anybody can conscientiously omit it in the management of these cases. I would condemn the continued use of phenacetin and antipyrin as antipyretics, although in small doses, say five grains, repeated several times, especially in the early stages of this disease when nervous symptoms and pain are very troublesome, they will give the patient relief and do no harm. I confess that I do sometimes use opiates, and in their place they do good work. When insomnia is a distressing and dangerous symptom, I have found ten-drop doses of chloranodyne to be of great value. Bismuth in twenty-grain doses is a very good remedy when the bowels are very troublesome. The food should be carefully selected and judiciously given. Some give large quantities of food to these cases claiming that many typhoid cases are literally starved to death. I consider three pints of milk too little, and I would vary the kind of food given. Coffee is a very good remedy. Every relapse is due to an indiscretion in diet or in exercise. I would not hesitate too long in beginning the use of stimulants. They should be begun as soon as the heart shows any signs of lagging.

Dr. J. B. Newman: I would give three to five pints of milk daily and with it barley water, oatmeal water and toast water; no eggs; no food producing a bulky excretion should be given. Prodromal symptoms, pain, tenderness and tympanites in the right iliac fossa, together with a subsidence of the fever in twenty-one days, I look upon as surely typhoid. I look upon the fever called typho-malarial as a mild typhoid, the intestinal lesions involving not Peyer's patches but the solitary intestinal glands which account for its milder course. We always have diarrhea in typho-malaria but not always in typhoid fever. My treatment consists first in the administration of calomel and rhubarb followed by castor oil, after which no more purging is allowed. During the first week I would give calomel, one-fiftieth grain, together with three grains of quinine three or four times daily, the latter being continued throughout the fever. The quinine leaves the patient in a much better condition than when it is not used.

Dr. Delos Parker: We should not forget turpentine as an intestinal antiseptic. Also for its effect on the skin. The antisepsis of the mouth is also important.

Dr. J. Samson: Abdominal symptoms are always present in true typhoid, but if the patient be kept perfectly quiet the stools soon become normal. I do not like Dr. Jennings' remarks touching the non-existence of typho-malarial fever nor of pure typhoid. The patient with typhoid fever has a peculiar facial flush and he cannot be interested in anything for any length of time. The Brandt system as carried out in hospitals is very good, but we will never be able to generally adopt it in practice.

Don M. Campbell, M. D., Secretary.

STATED MEETING, JUNE 26, 1893.

The President, FREDERICK W. MANN, M. D., in the Chair.

PRESENTATION OF PATIENTS.

Dr. Eugene Smith presented a patient from whose right eye he had recently removed a senile cataract by the simple method. The other eye had been operated upon several years before by the method with iridectomy. The contrast was strongly in favor of the method without iridectomy. There was perfect vision, a central, mobile and free pupil, no mutilation of the eye whatever being present.

DISCUSSION OF PAPERS.

Dr. Chmellicek read a paper entitled "Some New Features in the Etiology and Treatment of Cholera Infantum. (See future number of The Physician and Surgeon).

Dr. C. G. Jennings: It is difficult to tell just what class of cases Dr. Chmellicek means by cholera infantum. He has evidently seen more of these cases than the average city practitioner in Detroit is likely to meet. The infection of which the Doctor speaks is evidently at work in these cases, but we must also have a predisposition on the part of the child. These cases arise from a disordered fermentation going on in the alimentary canal due to the presence of bacteria. The idea of the carrying of the infection by the house fly is as far as I know original. Glycerine and limewater is good treatment, but a good purge should be administered in the early stage of the disease in order to thoroughly cleanse the alimentary canal. Intestinal antiseptics are all right in theory but clinical experience does not bear us out in our expectations of good to be derived from them, and most of these cases do very well without any antiseptics. The dietetic treatment should be varied according to the form of pathological fermentation going on. Entire abstinence from food is a good thing and will be well borne by the patient. Bismuth as an intestinal antiseptic and astringent is preëminently good. In naphthalin, salol and other so-called intestinal antiseptics I have no confidence. Aside from the dietetic management of these cases our knowledge of their etiology has done but little for us in suggesting efficient therapy.

Dr. F. Lydston Newman: In my opinion forty-eight hours without food is too long. I would like to ask **Dr. Jennings** if he always gives a cathartic in these cases? I myself cannot see the philosophy of such a line of treatment. Very copious enemata of some antiseptic fluid together with bismuth and opium fill the indications well, these indications being (1) to thoroughly empty the alimentary canal, (2) make the canal antiseptic, (3) quiet the nervous irritability.

Dr. Sherman: I most heartily agree with the sentiment of total abstinence from all food for some thirty-six or forty-eight hours. I give such patients glycerine and limewater with sterilized water and, later, administer bismuth and opium.

Dr. J. Flintermann: I have the impression that more children die from the medication administered than from the disease. This is only an impression which I have received. Many authorities say that not the least opium should be given to a child under one year, and inasmuch as cholera infantum is a disease which attacks principally children before the second dentition we should be most careful in administering this drug to these patients. Children who are nursed by their mothers seldom have cholera infantum and their feces are never offensive. What particular microörganism causes this particular disease I am unable to say. The disease makes ill-fed children its victims. This, together with the unsanitary surroundings and the exposure of the milk to infection, being the chief factors in its production. The profession should try to educate the people how to properly care for their children, especially during the hot months. In the management of the disease itself, I use sterilized food if the mother's milk is inaccessible; rectal injections of common salt or mild tannic acid; bathe the child frequently; pay particular attention to the skin, and relieve the bowels as much as possible.

Dr. J. B. Newman: Indigestible ingredients in the food are accountable for a good many of these cases. We have great gastro-intestinal irritability which frequently brings on collapse. I would wash the bowels out thoroughly with some antiseptic fluid. Stimulants should be used both internally and externally to meet the very great depression which is almost always found in these cases. Listerine, brandy, limewater and milk should be given. We must sometimes allay the irritability by opiates.

Dr. C. G. Jennings: I would not use a cathartic in the last stages of the disease, but in the beginning of the trouble, when there are irritable substances in the alimentary canal, I would clear them out by a cathartic. I must challenge DR. FLINTERMANN's statement that more of these cases die from the opium administered than from the disease. Opium can safely and profitably be administered to these cases if proper care be taken to give the dose suitable to the age of the child. If we could properly regulate the diet we would soon eliminate the disease.

DR. J. FLINTERMANN: My statement was merely an impression and may not be true. Perhaps in the hands of experienced and careful men opium may be safely administered to young children. But all young graduates should be warned of the danger in administering the drug, and all should be exceedingly careful in administering the drug to children under the age of one year.

DR. CHMELLICEK: In New York city many children are killed by opium because the occupants of the tenement houses dose the children with patent medicine containing an opiate before they send for a physician. In giving bismuth give it in suspension in a syrupy mixture. Dentition is a great exciting cause of these cases, many of them occurring between the fifteenth and twentieth month. Salol and naphthalin are good antiseptics. These children can easily and advantageously be left forty-eight hours without any food whatever, especially if glycerine and limewater is being administered, because the glycerine is a food. Keeping the skin in good order by bathing is advantageous; and milk properly prepared is the best food.

DON. M. CAMPBELL, M. D., Secretary.

EDITORIAL ARTICLES.

FANTASTIC THERAPEUTICS.

THE fantastic character of recent therapeutical suggestions, will, it is feared, cause a revulsion of feeling in favor of therapeutical nihilism. The science of therapeutics is particularly subject to the fluctuations imposed upon it by the idealism of its votaries. But, as SIR THOMAS BROWNE somewhere observes, "every poison contains its own antidote," and the excesses practiced by the insistent therapeutist engender a corresponding scepticism and mistrust which ultimately save this much-abused science from the oblivion of ridiculousness.

These two traits, this confidence of the believer, and the incredulity of the doubter, are admirably exemplified at the present time. On the one hand it is found that the ideas which have resulted in the concoction of microbic and animal-extract panaceas for every ailment have devastated the reason of the therapeutist. The very reasonable hypothesis that the various glands supply an internal secretion to the blood necessary to its maintenance as a vitalizing medium has been twisted into the baseless fabric of a vision of every organ secreting or manufacturing specific nutritional substances. In harmony with this conception a system of therapeutics is suggested which smacks of sixteenth century enlightenment; in which extracts of various organs are administered for diseases of homologous parts. On the other hand we find a distinguished German observer carrying his nihilism to the extreme of contending that all the results of electro-therapeutics are those of suggestion. Between so much faith and so little, where do we stand? Shall we next hear that opium relieves pain and chloroform produces anesthesia by suggestion? or shall we learn that zygomaticine is extremely beneficial in melancholia?

One of the potent causes of this therapeutical befuddlement doubtless arises from the proprietary interest in remedies. The profession is perpetually deluded by those who claim to enlighten it by carefully prepared information of an unreliable kind, regarding the physiological and clinical action of remedies. This makes it more and more incumbent upon the intelligent practitioner to limit his prescriptions to the actual materia medica of which he possesses definite and reliable information.

It would be sad to think that nothing should result from this outrageous idealism in therapeutics. If it be that "the end of dreams is to break them," let them be broken rudely provided this restore us to a fair degree of therapeutical sanity.

EDITORIAL BREVITIES.

MUNICIPAL ASSISTANCE TO THE GENERAL PRACTITIONER.

THE New York board of health has undertaken to assist the individual practitioner in a way that will commend itself to the good judgment of all, and suggest imitation on the part of similar bodies all over the country. In all cases of throat disease the board will, on the request of the attending physician, make a bacteriological examination in order that the nature of the trouble may be positively determined. The attending physician has only to remove by a swab, material from the affected surface and place this in a culture medium supplied him by the board. He will then be informed on the word of an expert whether the case be one of diphtheria or one counterfeiting this grave malady. The assistance thus rendered will be very useful to the practitioner, save unnecessary seclusion and isolation of the patient, and tend to the preservation of the community from infectious disease.

SUSPENDED ANIMATION.

CHICAGO is just now the refuge of everything marvelous, but it is doubtless whether any attraction equals in wonder that which is proposed shall be accomplished by one SEYMOUR, a mind-reader. This gentleman contends he can suspend animation for an indefinite period by swallowing his tongue after the manner of the Indian fakirs. He, therefore, proposes to be buried alive, and has had a magnificent coffin prepared with this end in view. After he is buried, barley is to be planted over his grave, and when the grain is harvested he is to be disinterred. The end of September is to be the date of resurrection. If there is no fake in this performance it will certainly be of scientific interest and possibly of some value.

OPIUM AND ALCOHOL.

THE agitation in reference to the sale of opium in India has called forth various opinions upon the question. One of the most interesting of these is that of ABDALLA MEER ALI DHARAMIE, a Mohammedan lawyer in Bombay, who gives his views of the opium habit as it prevails in Bombay and in his native province of Cutch. He declares that as compared with alcohol, opium does no harm at all. The quantity taken, he affirms, does not increase with the habit. He found opium-eaters of from fifty to eighty years old looking robust and healthy. He believes its suppression would be followed by an immense increase in the consumption of alcohol, which would be far more disastrous and deadly in its effects than the indulgence in opium confined to the present moderate limit. The "habit," in other words, has been so chastened as to be a dissipation of the mildest and most innocuous type. The degenerations following its use are not to be compared with those of "king alcohol."

MEDICAL NEWS.

The Kentucky school of medicine is now a four-year college.

Professor Politzer will visit the world's fair as a scientific delegate from Austria.

Dr. H. Hayes has been appointed assistant physician to the Toledo insane asylum.

France had seven hundred and four deaths from cholera during the month of June.

Edwin Booth bequeathed five thousand dollars to the home for incurables at West Farms.

There is a bill before the legislature of Texas which imposes castration as a penalty for rape.

Professor Von Esmarch is seventy years of age and has performed twenty thousand important operations.

Dr. Florence O'Donahue, of Syracuse, has been appointed a member of the New York state board of health.

Dr. E. W. Jenks has been appointed professor of gynecology in the Michigan college of medicine and surgery.

The Northern Ohio district medical society will hold its next meeting at Fremont, on September 21, 1893.

Dr. W. M. Carson, one of the oldest and most respected practitioners of Cincinnati, died Sunday night, July 9.

The Vermont state medical society will hold its eighteenth annual meeting in Rutland, October 12 and 13, 1893.

Built in 1755, the Pennsylvania hospital of Philadelphia, is the oldest institution of its kind in the United States.

To encourage respiration in cases of morphine poisoning it is advised to stretch the sphincter ani occasionally with a bivalve speculum.

The authorities of Rush medical college have issued an announcement in the French language. Foreign visitors have been making inquiries concerning the school, and the announcement was brought out for their information.

MISS E. ELLIS has presented Harvard university with ten thousand dollars, designating it for the departments of physiology and pathology.

PETER ARREOLA recently died at Tarimore, Mexico, aged one hundred and thirty years. He left two hundred and twenty living descendants.

DR. J. C. CULBERTSON has been tendered the chair of the principles and practice of medicine in the Cincinnati college of medicine and surgery.

THE postponement of the International medical congress has been occasioned by the outbreak of cholera. The meeting will take place in April next.

DR. G. I. CULLEN, editor of the *Cincinnati Medical Journal*, has been appointed assistant surgeon of the first regiment Ohio National guards.

A SALARY of three thousand dollars per annum is paid to professors in Edinburgh and Glasgow who fill the chairs of medicine, surgery and obstetrics.

MCGILL UNIVERSITY, MONTREAL.—Sir Donald A. Smith has endowed a chair of pathology and public hygiene by a gift of one hundred thousand dollars.

DR. CLARK GAPEN, of Chicago, has been appointed medical superintendent of the Illinois insane asylum, at Kankakee, *vice* Dr. S. V. Clevenger, resigned.

DR. S. POZZI, of Paris, is to visit the United States as a government representative to study the organization of hospitals and observe medical affairs generally.

THE summer corps of the New York board of health, which consists of fifty physicians, began inspection and prescribing in the tenement-house district on July 5.

DR. A. M. MAKEJEW has bequeathed one hundred thousand dollars for the erection of a church in connection with the various clinics of the university of Moscow.

AT the recent annual meeting of the Ontario medical association, held at Toronto, Dr. Langlan McFarlane, of that city, was elected president for the ensuing year.

AN autograph letter written at Paris in 1841 by Dr. Samuel Hahnemann, the founder of homeopathy, was recently disposed of at sale in New York city for twenty dollars.

TO MIND-READERS.—Professor G. Ponchet has offered one thousand dollars to any one who can read a single word known only to himself and enclosed in a sealed envelope.

ON July 5 the Illinois state board of health elected Dr. Wm. E. Quine, of Chicago, as president, and Dr. Scott, of Evansville, as secretary. The meeting was held in Chicago.

DR. J. S. RUNYAN, of Pine Bluff, Arkansas, a general practitioner who has scarcely reached his majority, reported eleven cases of abdominal section at the late meeting of the Arkansas medical society.

DR. HENRY W. WILLIAMS, for many years professor of ophthalmology in the Harvard university medical school, will give that institution twenty-five thousand dollars for the endowment of a professorship in that specialty.

The following is the verdict of a coroner's jury rendered in the case of a woman drowned at Highland, New York: "We do say upon our oath that the deceased came to her death by being found in the Hudson river. Cause of death unknown."

The twenty-third annual meeting of the Mitchell District medical society was held at West Baden Springs, Indiana, on July 12 to 14. Dr. Dudley S. Reynolds, of Louisville, was elected president, and Dr. G. W. Burton, of Mitchell, Indiana, secretary.

The American medico-psychological association held its annual meeting in Chicago, June 6–8. Dr. John Curwen, of Warren, Pennsylvania, was elected president for the ensuing year. The next meeting will occur on the third Tuesday in May, at Philadelphia.

Inoculation of Measles.—Inoculation with a view of securing immunity from measles has been performed in six cases by Dr. H. Thompson, of Glasgow. Serum from blisters was injected. Four are believed to have been immunized by the method, in two the experiment failing.

Cholera.—Dr. Haffkine has inoculated over two hundred persons at Simla in India, for cholera. The number includes leading medical men, officials, and ladies. Inoculation under his system is being carried on in Delhi, Agra, and Lucknow. In one British regiment over four hundred men have been inoculated.

The Wayne county board of poor commissioners have appointed a consultation staff to aid them in the medical treatment of the indigent poor. The following constitute the board: Surgeon, Dr. Hal. C. Wyman; gynecologist, Dr. E. W. Jenks; oculist, Dr. L. E. Maire; physician, Dr. A. E. Imrie; diseases of the chest, Dr. S. Bell.

The suit brought by Dr. Charles E. Simmons against the executors of the estate of Samuel J. Tilden to recover one hundred and forty-three thousand three hundred and fifty dollars for professional services rendered Mr. Tilden, has been terminated. The period of attendance comprised eight years. By the terms of a compromise recently effected the physician receives forty thousand dollars.

American Electro-Therapeutic Association.—The third annual meeting of the American electro-therapeutic association will be held in Chicago, September 12, 13 and 14, 1893, at Apollo hall, Central music hall block. Members of the medical profession interested in electro-therapeutics are cordially invited to attend. Dr. Augustin H. Goelet, president; Dr. Margaret A. Cleaves, secretary, 68 Madison avenue, New York.

At the last meeting of the Ohio state medical society the following officers were elected for the ensuing year: President, N. P. Danridge, M. D., Cincinnati; first vice-president, F. C. Larimore, M. D., Mount Vernon; second vice-president, William Caldwell, M. D., Fremont; third vice-president, W. T. Corlett, M. D., Cleveland; fourth vice-president, L. S. McCurdy, M. D., Dennison; secretary, Thomas Hubbard, M. D., Toledo; assistant secretary, Charles Graefe, M. D., Sandusky; treasurer, J. A. Duncan, M. D., Toledo.

THE Chicago medical college has a new laboratory building one hundred and six feet wide by one hundred and ten feet long. It cost one hundred and fifty thousand dollars and is said to be one of the finest buildings of its kind in this country. A new college building is being constructed on the same lot, and will be ready for occupancy at the opening of the college year. It is fifty-five feet wide by one hundred and six feet long.

A KANSAS physician has the following printed at the foot of his bill-head: "A prompt settlement of this bill is requested. If bills are paid monthly a discount of ten per cent. is given. Bills not paid promptly will be passed to my attorney for collection. If you pay your physician promptly he will attend you promptly, night or day, rain or shine, while your slow neighbor waits, as he makes the doctor wait, and while he is waiting the angels gather him in."

PAN-AMERICAN MEDICAL CONGRESS.—Those attending the meeting of the Pan-American medical congress, at Washington, in September, can see more of this country and can travel amid more historical associations via the Baltimore and Ohio railroad than by any other route. They will cross the Alleghany mountains, and will traverse the famous Potomac valley which was the theatre of the war between the states. Passengers from Detroit, Ann Arbor and other points in Michigan can make desirable and convenient connections with Baltimore and Ohio trains at Deshler, Ohio.

Dr. BENJAMIN B. ROSS, of Saginaw, died in that city July 26. The deceased was born near Dublin, Ireland, in 1838, his father being an officer in the British army. When six years of age he came to America with his parents, settling at Belleville, Ontario, where he was educated. When he became of age he entered the university of Buffalo, graduating from there in 1862, and shortly after removing to Saginaw, where he rapidly attained eminence in his profession. He was one of the prime movers in establishing Saint Mary's hospital, was city physician in 1868, and represented his ward as alderman in 1877.

THE Louisiana state medical society has elected the following officers for the ensuing year: President, Dr. A. B. Mills, of New Orleans; vice-president first congressional district, Dr. D. R. Fox; vice-president second congressional district, Dr. Charles Chassaignac; vice-president third congressional district, Dr. J. D. Hanson; vice-president fourth congressional district, Dr. C. D. Orvens; vice-president fifth congressional district, Dr. A. W. Jones; vice-president sixth congressional district, Dr. J. W. Dupree; recording secretary, Dr. P. McCutcheon, of New Orleans; corresponding secretary, Dr. A. G. Friedrichs, of New Orleans; treasurer, Dr. W. E. Parker, of New Orleans.

AN army medical school will be established in Washington City for the purpose of instructing approved candidates for admission to the medical corps of the army in their duties as medical officers. The faculty will be selected from the senior medical officers of the army, and will consist of a president, who shall be responsible for the discipline of the institution, and who will deliver a course of lectures on the duties of medical officers in war and peace; a professor of military surgery; a professor of military hygiene; and a professor of clinical and sanitary microscopy. The course of instruction will continue for four months each year, and will begin on November 1 in the army medical museum.

For several months a dispute has been rife regarding representation of the profession on the Ontario medical council. A settlement has recently been effected by changes in the medical act as follows: (1) The election of five additional territorial representatives, making the number seventeen instead of twelve as formerly. (2) The members are to hold office for four years instead of five. (3) The taxing of the profession is to be relegated entirely to the territorial representatives. (4) The next election is to take place in 1894.

At the recent commencement exercises of the university of Michigan a class of forty-four was graduated from the medical department. This number is about half as large as the classes of four and five years ago. The following is the list: W. C. Armstrong, S. H. Arthur, J. M. Atkinson, H. E. Baright, Fannie Lewis Bishop, W. Blair, M. D. Cadwell, Anna Clapperton, Luella Sophia Cleveland, Katharine Richards Collins, Anna Craig, N. De Haas, F. C. Gillen, Alice Hamilton, G. E. Hoffman, W. F. Hubbard, L. B. Humphrey, A. F. Hutchinson, Maria P. de Booij Ingram, J. H. Jones, H. J. Kennedy, Stella Kirby, Alvena Mauerhan, D. J. Moyer, A. L. Muirhead, J. P. Odell, W. W. Pearson, F. B. Powers, G. Roberts, H. R. Roether, C. W. Root, Mary Sanderson, W. O. Sauermann, F. G. Smith, Sarah Amelia Wilcox Soule, C. N. Sowers, Cora Lane Stoner, W. G. Tucker, J. C. Twitchell, F. A. Waples, W. A. Webe, Emma Hammond Wheeler, R. H. Wolcott, T. N. Yeomans.

The following resolution has been passed by the Iowa state board of medical examiners: Whereas, a number of medical colleges in the United States and Canada have adopted and require a four years' graded course of medical lectures as a condition of graduation, and others have expressed the determination to do so; therefore, *resolved*, that after July 4, 1898, no medical college shall be recognized by this board as "of good standing" within the meaning of section one, chapter one hundred and four, laws of 1886, that does not require as a condition of graduation four graded courses of medical lectures of not less than six months each—no two of which said courses shall be within the same calendar year. That graduation from any college of dentistry, and veterinary medicine, or of pharmacy, upon a satisfactory examination in anatomy, recognized by this board as of good standing, may be accepted as the equivalent of the first year's course of medical lectures by colleges requiring as a condition of graduation the graded courses above specified.

The Pan-American Medical Congress Excursion to Rome.—It has been definitely determined that the Pan-American medical congress excursion to the eleventh International medical congress will sail on the steamship "Werra" from New York, September 9, the day following the adjournment of the congress at Washington, and will arrive at Genoa, September 20, four days before the opening of the Rome meeting. Round trip steamer tickets may be procured for one hundred and forty-two dollars and fifty cents for inside rooms, and one hundred and fifty dollars and upwards for outside rooms. Tickets are good for members of the congress and their families and may be used at option of holder to return on any steamer of the line from Genoa, or on Saturday steamers from Bremen, or Sunday steamers from Southampton, during the months of October, November and December. Physicians desiring to avail themselves of this exceptionally low rate should at once become members of the Pan-American medical [illegible] (ten dollars) to the treasurer. Dr. A. M. [illegible] and notifying the secretary-general, Dr. Charles A. [illegible] to join the excursion. Passage should be [illegible] a stop at the Azores and [illegible] Spain. France [illegible] European guests of [illegible] allowed affords [illegible] international con- [illegible] sanatoria of South [illegible]

[illegible]

[illegible] welcomed [illegible] The present [illegible] appears to [illegible] ences in all [illegible] writer. The [illegible] ing a dic- [illegible] ments. This [illegible] chapters in [illegible] appliances, [illegible] engravings [illegible] the result [illegible]

[illegible] Cloth.

[illegible] Those [illegible] regard- [illegible] cents;

[illegible] N.

[illegible] fatty [illegible] a ten- [illegible] having a tendency to general obesity are partial also to diets rich in sugar and starches, and small amounts of carbohydrates added to such a diet greatly favors the deposition of fat. The hereditary tendency to accumulation of fat, in my experience, usually manifests itself in males at the age of thirty, sometimes earlier, sometimes later. In females usually at about twenty-eight. As long as fat serves its functions only—that of adding rotundity to the form and serving as food supply in times of sickness—there is no necessity of seeking to eliminate it. It is when it accumulates, persistently causing distress by its weight and interference with locomotion, or when internal viscera become so degenerated by substitution of fat for normal organic tissue, that distress is caused or life threatened, that we should seek to correct its effects.

The members of the medical profession doubtless have their own ideas as to whether relief should be given on purely cosmetic grounds, or not, and it is not my intention to discuss this subject from such a stand-point. The question is, How can necessary relief be afforded? In endeavoring to throw some light on the subject, I take occasion to report a few cases.

Case I.—Mrs. E., aged twenty-eight years; weight, one hundred and thirty-eight pounds; height, five feet; complained that she suffered from heat. For two years she has been unable to stand the moderate summer elevations of temperature without great inconvenience. Perspired so freely that she was obliged to remain indoors most of the time between June and September, on account of ruining her clothes with perspiration. No female or other trouble was present, but she seemed to have a superabundance of adipose tissue generally distributed, especially about the chest and abdomen. Habits regular, bowels and courses likewise. Concluded to see the effect of reducing her weight, and for this purpose, after trying fucus vesiculosus in the dose of one to two drachms of the fluid extract three times a day, with some slight benefit, I determined to try phytolacca decandra (which has been recommended by Dr. M. M. Griffith, as a potent measure in diminishing obesity). The preparation used was phytoline (Walker) a remedy prepared from the active principle of the phytolacca berries, after being somewhat frost-bitten. The dose first used was four drops fifteen times a day. The patient used two bottles, after which she reported herself feeling very much improved, perspiration lessened, weight one hundred and twenty-eight pounds, appetite about the same, and regular bowels and courses.

Case II.—H. W. M., aged forty-three; weight, one hundred and sixty pounds; height, five feet six inches; complained of precordial distress, difficult breathing, occasional attacks of vertigo, heart beat feeble, irregular and slow, sometimes rapid, anemia, weakness in the legs, which were not very muscular. Patient was addicted to alcoholics, and suffered consequently from dyspepsia and atony of the bowels. Diagnosis: fatty degeneration of the heart due to alcoholism. Stopped his alcoholics, administered stomachic tonic of quinine, strychnine and capsicum, and gave phytolacca (phytoline) in the dose of ten drops six times a day, before and after each meal. In three weeks there was a notable improvement in every respect. Weight had decreased five pounds, heart beat fuller and more regular, precordial distress and difficult breathing ceased altogether, digestion improved, appetite likewise. Patient was on the road to recovery when persistent exposure to extreme cold brought on pneumonia, from which he died after five days' illness.

In these two cases there was no advice given as to diet except the withdrawal of alcoholics in the last case, it also being remembered that alcoholics antagonize the action of phytolacca.

Case III.—Mr. N., aged fifty-four years; weight, two hundred and forty pounds; height, five feet ten inches; complained of eczema of the legs and left side. Inspection showed in the left hypochondrium, a larger circumscribed ulceration about two inches in diameter, surrounded by inflamed vesicular area; the legs showed similar ulcerations in the skin. Patient perspired freely—almost to a point of hyperidrosis. During cold weather patient was not troubled except from difficult locomotion and occasional attacks of rheumatism. Examination of urine showed no sugar. Appetite fair, drank considerable beer, bowels regular. Astringent salves and lotions cured temporarily. Diagnosed eczema, due to maceration. Placed patient on phytolacca (phytoline) twenty-five drops before and after each meal. In two weeks patient lost ten pounds, had somewhat less appetite, less perspiration, sores took on a healthier condition and after continuing the treatment about two months and a half, patient felt as well as ever, and tipped the beam at two hundred pounds. Since then the patient has gained but little if any, perspired normally, and has no return of his eczema and no recurrence of rheumatism. How long this condition will last time alone can tell.

This last case was one especially calling for some fat reducing agent, and the checking of perspiration. In this case bread and potatoes were prohibited, likewise other forms of starchy food; beer was reduced in quantity two-thirds. These measures materially increased the fat-reducing properties of the phytoline.

The next question is, How does phytoline cause the reduction of fat? This I am at present unable to say. I have, however, noticed that the feces seemed to be considerably richer in fatty materials than is normal, which condition cannot be attributed to indigestion, as in all other respects digestion was normal. Perspiration and urine apparently unchanged by the action of the drug.

Official preparations of the root have been used with little or no results, except to cause continued nausea, vomiting and diarrhea. Phytoline is prepared from the ripe berries of phytolacca decandra after having been touched by the early frost. This preparation does not cause nausea in the ordinary dose, and though slight laxative effects have been observed from it, I have never seen a pronounced case of diarrhea. The appetite is sometimes slightly diminished, chiefly in the morning. It seems to me to be specially indicated in all diseases characterized by fatty degeneration of internal viscera, especially of the heart and liver. Those who choose to use it for its cosmetic effects in reducing fat, will also find in it a serviceable adjunct to properly restricted diet and exercise.

SURGERY.

A CASE OF SYPHILITIC RUPIA—REMARKABLE AND RAPID RESULT OF TREATMENT.

In presenting what I consider to be an interesting clinical report, I cannot detail something novel with reference to the pathology or symptomatology of this rare, and one of the latest manifestations of the secondary period, so-called, of syphilitic infection; but I do contend that in reaching an excellent therapeutic result by the use of a proprietary medicine, I should do justice to the manufacturer by giving it publicity, believing that a similar result would possibly not have occurred had I relied solely upon the conventional remedies applicable to such cases.

Like the pustular syphilide generally, the presence of rupia "cast a mournful shadow upon the condition of the patient," and justifies the fear that purulent metamorphosis of syphilitic foci in other localities may be apprehended, besides being an index of the vitiated condition of the individual.

The case in question concerns a young German, aged twenty-seven, a barkeeper, who presented the initial sclerosis in the usual locality three years ago.

After the usual period of incubation, the first manifestation of the disease was an unusually marked roseola, covering his entire body, but most pronounced on his face. In order to relieve him as rapidly as possible of the tell-tale evidences of this constitutional materia peccant, I prescribed one-eighth of a grain of bichloride of mercury every four hours, and directed the application of an ointment as follows:

℞ Oleate of mercury 5%, ... ℥ss.
Lanoline, ... ℥ss.
Misce.

To be rubbed on his face night and morning, until every vestige of the irritation disappeared. As is customary after this treatment, two days sufficed for the prompt elimination of all external appearance of the disease.

I then checked the internal administration of the bichloride, and commenced the inunction treatment, continuing this, with two hot baths per week, for a period of three months; the administration of tincture of iodine was then begun, and continued for two weeks, when the mercurial inunction was resumed. Excepting the appearance of a few mucous patches, nothing occurred for a year and a half to mar the constitutional condition of the patient.

The absence of induration of the palpable lymphatic glands led me to believe that recovery had asserted itself.

I did not see the patient for a year and a half, when five weeks ago he presented himself at my office for further treatment. With the exception of marked anemia, indurated post-precervical and epitrochlear lymphatic glands, two corporeal and two cephalic, rupial, oyster-shell crusts were the only manifestations of the infection that could be determined. The latter, indeed, were typical in character: the one situated on the upper, inner surface of the thigh; the second, on the arm corresponding to the insertion of the deltoid muscle. These were as large as a silver dollar. The ones on the scalp were much smaller, though not without sufficiently distinctive marks to differentiate them from ecthymatous ulcerations.

Experiences gained in the treatment of all the various cutaneous manifestations of syphilis have taught me, that in whatever stage of the disease the patient presents himself, a combination of internal treatment with the local application of an ointment containing the oleate or mercury has been fruitful of the very best results. The usual plan of treatment followed in cases of this kind would naturally be the internal administration of toncis, particularly those of the iodine group, or if the anemia were not too marked, to combine the treatment with large and progressive doses of iodide of potassium.

Having recently read a very strong recommendation, presented in a clinical lecture, delivered by Professor Germain Sée before the academy of medicine of Paris, that the halogen or lime salts possessed more intense and favorable therapeutic properties than the potash salts, and having in their favor the fact that they can be given with less disturbance to digestion, I was determined to give this recommendation a trial.

The iodio-bromide of calcium compound (The Tilden Company) contains the iodide of calcium, besides some vegetable properties which are tonic in their character, and I naturally accepted this preparation as the most available at the time. So that my treatment consisted of prescribing ten per cent. oleate of mercury in lanoline, as an external application to the rupial sores, and the internal administration of the elixer iodio-bromide in teaspoonful doses four times a day, suggesting to the patient that at each dose upon each day he should increase the quantity fifteen drops. Mark my surprise when within one week and a half the entire rupial elevations had disappeared, leaving the characteristic reddened base as a reminder of its previous existence.

I present this report to the profession with the full knowledge of my responsibility, and I feel satisfied that the excellent result achieved warrants a recommendation of the product used in this case.—Joseph L. Bauer, M. D., in *Saint Louis Medical and Surgical Journal.*

THERAPEUTICS.

THE THERAPEUTIC MERIT OF COMBINED REMEDIES.

In nearly every case where quinia is indicated, it can be advantageously combined with antikamnia, which thus becomes a valuable adjunct to quinia. Quinia, for example, is a most decided febrifuge, and its action is usually promptly reliable; but when combined with this member of the aromatic series, its action is markedly increased. Some individuals, however, cannot take any of the coal-tar derivatives; consequently the use of antikamnia will be inhibited in such cases; on the other hand, some patients cannot take quinine.

An important benefit to be derived from the addition of antikamnia to quinine is that it removes the sense of fullness in the head, constriction about the forehead and tinnitus aurium—so common when the latter drug is administered alone; the disturbing action of quinia on the auditory nerve is suspended to a great extent, and the usual quinine deafness is absent. The combination of these agents in tablet form is a happy one.

The combination of antikamnia with quinia is valuable in the racking headache, with high fever, attendant upon malarial disorders. It is likewise valuable in cases of periodical attacks of headache of non-defined origin; of the so-called "bilious attacks;" of dengue; in neuralgia of the trigemini; in that of "ovarian catarrh;" and, in short, in nearly every case where quinine would ordinarily be prescribed.

Binz claims specific antiseptic powers for quinia; other writers are in accord with him on this point, and report good results from large doses in septicemia, pyemia, puerperal fever, and erysipelas. It is a germ destroyer of the bacilli of influenza (la grippe). A full dose of quinine and antikamnia will promptly relieve many cases of this disease. In the gastric catarrh of drunkards, this combination is valuable. Quinia is a poison to the minute organism—sarcina; and antikamnia exerts a soothing, quieting effect on the nerve filaments. A full dose of antikamnia and quinia will often arrest a commencing pneumonia or pleuritis. This combination is also useful in the typho-malarial fever of the South —particularly for the hyperpyrexia—both quinia and antikamnia, as previously said, being decided fever reducers.

The germicide power of quinia is the explanation of its success in the treatment of malarial disturbances. Thus it is also a prophylactic against the various manifestations of malarial poison, and as such it can be relied on. The cause of malaria as a disease consists of pigmented bodies, which penetrate the interior of the red blood corpuscles—pigmented bodies of various shapes and flagellate organisms—both having ameboid movements—the filaments being in active vibration.

In meningeal troubles, attended by marked acceleration of the heart due to the rise in the fever temperature, full doses of quinine and antikamnia at intervals of, say about four hours, will be productive of good. In measles, large doses of the combination at night—say ten grains of each for adults (doses for children in proportion), will relieve the distress of the catarrhal pneumonia, and modify in great degree, the amount of the exudative products. The periodical neuroses which may be either regular or irregular in their manifestations, but which are dependent on the malarial germ for their origin, are all controllable by the combination of quinine and antikamnia. Examples of such neuroses are asthma, laryngismus stridulus, summer catarrh, etc. Indeed, for the hemicrania and neuralgias of malarial origin, the combination of quinine and antikamnia, just alluded to, may be declared *a specific.*

The dose of quinine may be made smaller than usual when administered with antikamnia. Thus, one or two tablets of two and a half grains each of quinine and antikamnia will prove sufficient for great utility in puerperal mania, in the headaches of advanced age, accompanied with vertigo and despondency.

This combination is capable, by the combined influence of each drug on the nervous system and blood, of restraining all the processes which develop heat, organic changes, and muscular motion; therefore, it is "the one thing needful" in the treatment of the hyperpyrexia of malarial fevers. In the vast majority of cases, when necessary to administer quinine, if antikamnia be added to the prescription, the results will be surprising.

Formerly, the idea prevailed that in order to render the treatment of periodical fevers efficient, the gastro-intestinal tube should be cleaned out by emetics and cathartics. This, however, is a fallacy, as the conditions they are intended to remove depend mainly on the malarial poison, for which the combination of quinine and antikamnia is the specific cure.

In speaking of the treatment of pneumonia by quinine and antikamnia, Professor Palmer says: "The effects desired, and certainly as a rule produced, are a decided reduction of temperature, a marked diminution in the frequency of the pulse, a decided moisture of the skin or free sweating, a slower and more easy respiration, or relief from pain, and the feeling of fullness of the chest, a diminution of the cough and of the tenacious and bloody character of the expectoration; and, in short, not only is there a checking of the fever, but of all evidences—general and local—of the pulmonary engorgement and inflammation."

In Meniere's disease, or "labyrinthine vertigo," this combination has, by persistent use, entirely removed the trouble in many cases. The curative effects of quinine and the coal-tar antipyretics in sunstroke are well known, and have been used recently with great benefit in numerous instances in this country and in India. In hysteria, and even in epilepsy, the combination of quinine and antikamnia is often indicated, and will frequently give the desired results. In whooping-cough and hay fever, quinine and antikamnia will prove beneficial.

The tablets of equal parts of quinine and antikamnia, spoken of in this article, can be administered by the rectum, with good effect. They should first be dissolved in whisky, and then water can be added in any quantity needed—always remembering the total quantity of each drug in such enemata.—S. J. Clark, M. D.

A NEW HYPNOTIC.

THE results obtained on animals by the action of a new hypnotic, which has received the name of chloralose, and its effects are reported to us by a competent authority to be so striking, that it seems desirable to give some particulars as to its action in addition to those in the *Epitome* of January 28, 1893.

Chloralose is a combination of chloral anhydride and glucose, or grape sugar, and appears to have been first described by Hetter in 1889. Professor Richet and M. Hanriot have recently prepared this body and studied its properties. It is prepared by heating equal quantities of chloral and glucose, and is obtained in fine crystals which have the formula $C_8H_{11}ClO_6$. When given to a dog (five-tenths gramme per kilogramme of body weight—a very large dose), after three-quarters of an hour or so the animal's power of walking is interfered with; it lies down and falls into a deep sleep, which may last several hours (eight to twenty-four), when it awakes apparently in a more or less normal condition. This drug has the advantage over other hypnotics that it does not appear to have any deleterious effect on the heart and circulation. The blood pressure remains almost normal under the influence of a large dose, and with fatal doses the heart is the last to die, death taking place through arrest of the respiration. In small doses it diminishes the respirations, but has no effect on the temperature.

It is upon the nervous system that chloralose exerts its specific action. With a dose administered by the stomach (twenty-five hundredths gramme per kilogramme of body weight) the dog walks about, avoids obstacles, but appears to have lost all power of recognizing what these objects are. With a larger dose the dog walks as if under the influence of alcohol. With a dose sufficient to cause sleep, the sensibility to pain is obtuse and may be absent. Thus compressing the skin or claws forcibly causes no evidence of pain, and it seems that under chloralose the sensibility for pain is completely abolished. The dog, however, continues to react to tactile impressions or to shock; thus a tap on the table causes a reflex movement either localized or general. The drug appears to offer the possibility of separating tactile from painful sensibility. The reflexes are not only preserved, but they are exaggerated. Chloralose acts directly on the cerebrum, leaving the bulbe and spinal cord unaffected. The excitability of the cortex cerebri for direct stimulation diminishes with the dose of the drug. It does not appear to be cumulative in its action, and the dose does not require to be increased in order to obtain sleep.

The therapeutic action of chloralose has been investigated by Goldenberg. When administered to man by the mouth, sleep usually comes on in an hour, and lasts for seven or eight hours, and on awakening there is no headache or digestive disturbance. The ordinary dose for an adult is twenty-hundredths gramme (three grains) for twenty-four hours. To procure sleep, Goldenberg gave fifteen-hundredths to twenty-hundredths gramme for a woman, and thirty-hundredths for a man. It is given dissolved in water, each tablespoonful containing five-hundredths gramme of chloralose, or in the form of capsules which contain twenty-hundredths gramme, or pills each containing ten-hundredths gramme. In water its taste is readily masked by peppermint.

As to the cases in which it is serviceable: It is excellent in cases of simple insomnia, and above all in cardiac cases associated with insomnia, as it does not affect the heart or lower the blood pressure; nor do affections of the digestive tract contraindicate its use. It does not succeed in cases of insomnia associated with pain. In such cases morphine is to be preferred. In some exceptional cases it has been found to produce headache, disturbance of vision, and spasm. Hysterical persons are very susceptible to its action. The action of chloralose seems well worthy of being tested by clinicians.—*British Medical Journal.*

THE COCA OF PERU.

THAT all men and women feel the weariness of life is testified by the fact that the people of all nations and climes have the universal habit of daily seeking a restorative and stimulant in one of the vegetable products which contain a substance or alkaloid capable of exercising a definite effect on the nervous and cardiac systems. Thus, the Chinese and Japanese sip their tea, and the English following their example, brew the 5 o'clock cup of the fragrant herb to sustain them in the day's work. The Arab and Turk seek, like the French and Germans, restorative powers in the aromatic coffee berry, the Chingalese chew the betel nut, and the natives of Peru, on the slopes of the Andes, find in coca leaves a principle which sustains the body in fatigue and comforts the mind in hopelessness. Von Bibra says of coca: "It satisfies the hunger, lends new strength to the weary and fatigued, and makes the unhappy forget his grief." What then is this strange substance which seems to conceal a fairy's wand?

Coca is obtained from the leaves of a shrub-like plant called the erythroxylon coca. It is a native of Peru and Bolivia, where it has been cultivated with the greatest care from the remotest antiquity. When Peru was conquered by the Spaniards in the sixteenth century, and the ancient and interesting people of this country were discovered, it was found that their incas, or kings, looked upon the cultivation of the coca plantations as a public and national duty, and also that the strange custom prevailed among the Peruvians of chewing the leaves of the coca plant during frequent and short periods of repose specially set aside for this purpose. This custom prevails to this day in Peru and Bolivia.

The physical effects of coca are salutary, and in many respects more remarkable than the mental. It is universally acknowledged that coca stills hunger, overcomes drowsiness, and increases bodily activity. All travelers in the Andes bear testimony to the wonderful power shown by the Indians of enduring fatigue, cold, wet and exposure, with only the scantiest allowance of poor food, if they are supplied with coca. The life of the Indian of the Andes is one of extraordinary toil and hardship. His diet consists mainly of a small quantity of maize and frost-dried potatoes. He is constantly exposed to the intense heat of the plains, or to the terrible cold of the high plateaus of the Cordilleras. The toil exacted of him in the mines and the plantations is excessive, but he is yet able to perform, not exceptionally, but constantly and as a matter of daily life, the most astonishing feats of endurance on a diet which would be absolute starvation to a European, or even for a time without food at all, by the aid of the power which coca gives. The most striking stories are told of the men engaged in the postal service, who, half-naked, traverse the icy slopes of the Andes, carrying the heavy mail bag. These men walk from two hundred to three hundred miles, crossing the mountains by paths rising thirteen thousand and fourteen thousand feet above the sea level. Their scanty clothing is an ill-protection against fierce snowstorms, the intense cold, and the rarified air of the Andes. Their food for the journey consists of from one to two pounds of dried maize and potatoes, but if supplied with sufficient coca to chew, they endure cold, hunger, fatigue and sleeplessness, not only without complaint, but without even seeming to be aware of them. In like manner the Indian laborers in the mines of the Cordilleras, whose toil is spoken of as incessant and excessive, and performed in damp, cold and darkness; the shepherds tending their flocks of alpacas on the bleak pampas, and the farmers irrigating their fields at night in midwinter on the high plateaus, standing often knee-deep in icy water, and exposed to cutting blasts, are all said to be equally inured to a life of surprising hardship and privation by the daily use of coca. It is stated, however, that though no hermit or monk ever lived so ascetic a life as these poor Indians, yet the appetite for food is only stayed, not destroyed, by coca, and that if anyone is kind and generous enough to feed them they eat with voracity and evident enjoyment. Spaniards who go to work on the mines cannot stand the great hardships of the life and the inclemency of the Cordilleras till they take to the regular use of coca. Von Tschudi tells us that this life of silent endurance and bitter abnegation may be much prolonged, even in one instance to one hundred and thirty years.

The other remarkable effect of coca is the influence it exercises in the respiratory centres, so that the rarefied air of the higher altitudes of the Andes can be breathed without the distress usually occasioned at the height of thirteen or fourteen thousand feet above the sea. All travelers speak of the extraordinary way the Indian porters will keep up with the quick pace of the mule along the roughest mountain paths without ever showing any signs of breathlessness.

Though wonderful, but little credited, stories were told for two centuries of the staying powers of coca leaves, no attempt was made to introduce them into Europe, and scientifically to test their value either as dietetic or therapeutic agents until Mariani, of Paris, began his researches.*

I have had considerable experience of the value of Mariani's wine of coca under exceptional circumstances. Under pressure of time for public *viva voce* medical work, I found that I could work for from fourteen to sixteen hours a day for weeks together, without mental or physical fatigue or bad after-results, if I took a small daily dose of Mariani wine. My modicum was a bottle a week. discontinued immediately my task was done. Recently, when making a long convalescence from influenza, in which depressing cardiac symptoms were marked, I found again aforesaid Mariani wine a good and reliable restorative. I have no reluctance in saying that if I had to acomplish some severe work which drew exhaustingly on my full mental and physical powers, doing literary work under pressure, or attending patients through serious illness, I would unhesitatingly, and with good conscience, seek the support and power of endurance this marvelous preparation of cocoa can give.

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*See his excellent work on "Coca and its Therapeutic Applications."

Mr. Eber Caudwell published an interesting account in the *British Medical Journal* of the effect it had on himself in enabling him to go through long hours of toil without sleep, and while preserving his full mental activity and vigor, Singers find that coca Mariani enables them to inspire more deeply, and to hold their breath longer than they could otherwise do. Lennox Browne and Morell Mackenzie have highly recommended it.

The scientific study of cocaine has led to a better comprehension of the mysterious qualities of the coca leaf. The first effect is sedative, rapidly followed by stimulation, in which the heart beats are quickened, the nervous system becomes more active, the intelligence more acute, and the muscles pass more easily into a state of contraction. Dr. Mantagazza says that when he was under the influence of coca he had an irresistible inclination to gymnastic exercise. The absence of the sense of hunger seems to be due not only to the anesthetic effect of the cocaine on the nerve ends of the stomach, but also to the fact that coca is an actual economizer of food, and so modifies the vital processes in muscle as to affect its chemical activity, and render it capable of performing an equal and greater amount of work with a lesser consumption of carbohydrates (Stockman). The absence of emaciation or subsequent debility or other bad results after the most exalted powers of the organism have been called forth, point to coca being more than a nerve stimulant, but also an actual economizer of the bodily expenditure. If it diminishes the consumption of carbohydrates during muscular activity, that is to say, enables the machine to work with less fuel, less oxygen will be required, and hence is explained the effect coca has in preventing breathlessness when ascending high mountains. Too much stress cannot be lain on the importance of using only a reliable preparation of the drug.—*The London Hospital.*

CALOMEL IN HEPATIC ASCITES.

Palma (*Therapeutische Monatshefte*, Mareh, 1893) points out that Jendrassik, in 1885, was the first to call attention to the diuretic properties of calomel in hydropic conditions, and it has been employed in cardiac, nephritic, and hepatic dropsies, giving, in the first condition, valuable results at the hands of most observers. Nephritic complications, when thus treated, did not yield so satisfactorily, whereas opinions differed with regard to the benefits to be derived from calomel in hepatic affections. The author describes a series of eight cases of liver disease, comprising patients with and without ascites, in which this condition, when present, was secondary. Most valuable histories and tables are reproduced, showing a remarkably beneficial result in four of the six ascitic cases, the urine being increased three to ten-fold in quantity, causing disappearance of the fluid in the abdominal cavity and all subjective symptoms. In the two remaining subjects with ascites treatment showed no results, the patients dying while in hospital of advanced disease and cholemia. Very slight diuresis only, though attended with improvement, was produced in two patients, whose disease was unaccompanied by any evidence of edema or ascites, but great relief was afforded with increase of urine to a ninth and last patient suffering from ascites due to secondary carcinomatous disease of the liver. The calomel was given during successive periods of three days, separated by intervals of one to three days, the drug being given either in repeated doses of four and one-half to nine grains daily, or in quantities decreasing from fifteen to six grains per diem. Two periods sufficed in the first cases quoted, and stomatitis and diarrhea were obviated by means of chlorate of potash gargles and opium, the latter only failing rarely and temporarily. Moreover, no renal or cardiac irritation was produced. The manner of action is not quite evident to the author, who, however, inclines to the view that calomel has a direct action on the kidneys and liver, as the failure of the drug in two of his cases to produce diuresis must be attributed to the advanced disease of the liver, no kidney lesion being found post-mortem.—*British Medical Journal.*

THE VEGATABLE MERCURY OF BRAZIL.

In the April number of the *Annales de dermatologie et de syphiligraphie* there is an article by Dr. Cathelineau and Dr. Rebourgeon on this drug, founded on experiments in Professor Fournier's laboratory. It seems that in the equatorial regions of Brazil there grows a tree called by the natives *murrurè.* It has not yet received its scientific name or been classified. By incisions into the bark of this tree a juice called vegetable mercury is obtained. In a work entitled "Formulario e guio medico," published in Paris in 1884, Chernovitz stated that murrurè juice was used in doses of a drachm, in half an ounce of water, the dose being repeated on every alternate day, according to the effects produced. It is an energetic purgative, and the natives use it especially in rheumatic affections, and above all in syphilis, whence its name. The bark is of a brick-red color. From its outer surface scales of a much deeper red are somewhat readily detached. Its inner surface is fibrous, grayish and rather hard. The juice is a reddish liquid of rather a vinous odor and a sweetish taste. It is syrupy and of acid reaction. After being neutralized it was administered to a rabbit by intravenous injection to the extent of four cubic centimetres to the kilogramme of the animal's weight, and caused death in thirty minutes. At the necropsy the stomach and intestine presented a vinous-red color. In the left ventricle of the heart there were reddish spots here and there. The kidneys were affected in like manner. In a dog an intravenous injection of four cubic centimetres to the kilogramme gave rise to the same phenomena and produced death in forty-five minutes. Given by the mouth, to the amount of eight cubic centimetres to the kilogramme, it caused death in twenty-four hours, and the lesions found were the same as have been mentioned.

Mururè juice is only partially soluble in distilled water, but the residue is soluble in alkalinized water. The authors experimented separately with the portion that is soluable in water and with that which dissolves only in alkalinized water. When the former was used, at the necropsy the heart and the kidneys were found particularly affected, while the stomach and intestine presented merely a light coloration. When the latter was employed, death took place much more tardily, but the animals had intense diarrhea, which was not observed in the others; moreover, at the post-mortem examination it was particularly the stomach and intestine that showed an intense red coloration, while there were no visible lesions of the heart and kidneys. The authors do not seem to have employed the drug remedially.

CITRIC ACID AS A MEANS OF STERILIZING WATER DURING EPIDEMICS OF CHOLERA.

According to J. de Christmas (*La Mèdecine Moderne*) a weak, watery solution of citric acid is a sure means of depriving water of cholera germs. The author made a series of experiments with cultures of cholera. A few drops of a watery solution of said cultures were placed by means of sterilized pipette in a watery solution of citric acid, of various strength and well mixed. After fifteen minutes a drop of this mixture was placed in beef bouillon, slightly alkaline, and the tubes put in the incubator at a temperature of 32° centigrade. An examination made in from twenty-four to forty-eight hours revealed the fact that a solution of citric acid of the strength of four in ten thousand was sufficient to suppress the development of the cultures, a solution of six in ten thousand almost destroyed them, while a solution of eight in ten thousand always kills them. Control experiments showed that a feeble quantity of citric acid mixed with bouillon exercised no influence in the development of the cultures. Pieces of linen dipped in solutions of cholera cultures became sterilized in about fifteen minutes, in a solution of nitric acid of the strength of eight in ten thousand. From these results the author concludes that citric acid may be of great service in time of cholera to sterilize all the water used. Every twenty-four hours a solution should be prepared in porcelain vessels, holding each from ten to twelve litres of water. To the water of one of these vessels ten grammes of citric acid are added and stirred until the whole is well dissolved. This solution has a slight acid taste and may be used as such, or mixed with wine, syrup, etc., for drinking and other purposes. The solution is well borne even by children a year old. It does not cause diarrhea, nor has it any deleterious influence on the teeth. The author has never observed any bad effects produced from its use, and highly recommends it to be employed especially in localities where cholera appears to be epidemic.—*Therapeutic Gazette.*

THE USES OF COD-LIVER OIL IN THE ARTIFICIAL FEEDING OF INFANTS.

The words of caution with which I concluded my article on the artificial feeding of infants in the last issue of the *Doctor of Hygiene*, namely, to watch closely the child's bodily weight and in case the child did not thrive as it should, to try the effect of the administration of small doses of cod-liver oil in the form of some reliable emulsion, were given because even the best artificial food is necessarily deficient in one of the most important constituents of food—that is fat. Not alone is fat necessary to build up the tissues and to supply fuel to the fires of life, but it also plays a very important part in intestinal digestion, and taken in proper amounts it aids digestion in the stomach as well.

These facts were shown long ago by Lehman ("Physiological Chemistry," Philadelphia, 1855).

Fat constitutes the basis of the chyle, which is composed chiefly of finely divided oil, each globule of which is surrounded by a thin envelope of albumen. This emulsion is formed by the aid of the biliary and pancreatic juices in the small intestine.

It has been shown that of all the oils or fats that which is expressed from the liver of the cod is the best adapted to digestive processes.

Food is designed to effect three distinct purposes: first, to build up the body in its growing state; second, to replace the tissues that have been used up; third, to supply fuel to the flame of life, that is, to impart force to the nervous and muscular systems. The part performed by the fats is a most essential one, and consequently a diet that is deficient in fat is followed by decreased vitality in the person living upon such a diet.

But fortunately for mankind the converse of this is also true; decreased vitality from almost any cause is remedied by the administration of fat in the form of cod-liver oil and the list of diseased conditions in which the oil is serviceable is a long one, and includes consumption, scrofula, chronic dysentery, chlorosis, rickets, skin diseases, rheumatism, chronic bronchitis, epilepsy and so forth. Persons with these diseases, and with waisting diseases generally, require a fatty diet. For growing children a diet comprising fat is essential. If they do not get it their muscles grow flabby and their skin loses its firmness.

It is interesting to know that cod-liver oil differs from other fats in that it contains various biliary principles which, of course, are derived from its source, the liver of the cod. But it also contains traces of iodine, bromine, phosphorus, sulphuric and phosphoric acids, lime, magnesia, soda and iron.

The objection generally advanced against the use of cod-liver oil is its nauseous taste. This has been removed by the art of the pharmacist and chemist, who have succeeded in making the oil palatable and even pleasant. This is not all that has been done, however, by these experts. By artificially emulsionizing the oil, that is, by imitating nature's operation in the digestive processes, they have produced a preparation that is very easily digested and assimilated even by the most delicate stomachs. Nor is this all. By combining the oil with the hypophosphites of lime and soda they add greatly to its value as a constructive food.

Exactly how these hypophosphites act when taken into the system we do not know, but we do know that they prevent waste of the tissues and that they promote what we call constructive tissue metamorphosis. This effect makes a given amount of food do a maximum amount of work. The best emulsion of cod-liver oil is, in my opinion, that prepared by Scott & Bowne, and known as Scott's emulsion. This preparation I have found to be a carefully prepared emulsion of the best oil, combined with the hypophosphites of lime and soda. The dose for an infant should at first be very small, say from a quarter to a half teaspoonful after feeding, for a babe of three to six months, and not given oftener than four times daily. Gradually this amount may be increased until the child takes a half teaspoonful six times in twenty-four hours.

The effect of the oil on the bowels should be carefully noted and the dose regulated by the number of movements, their character, and the amount of oil contained in them.—Cyrus Edson, M. D.

THE ACTION OF EUROPHEN UPON THE TUBERCLE BACILLUS.

Siebel, in 1891, published his bacteriological investigations of europhen from which he concluded that this substance is at least as effective as iodoform. He failed, however, to extend his experiments to the bacillus of human tuberculosis. Christmann has recently investigated the action of various substances upon tubercle bacilli and among them that of europhen.

For his experiments he employed pure cultures of this organism with exception of a small series of experiments with tuberculous sputa. The europhen was either directly dusted on the cultures or placed in a short reagent glass and suspended in the hermetically closed culture glass or employed in the form of a concentrated solution in olive oil.

The animals for the experiments comprised exclusively guinea-pigs, since according to Koch these are more susceptible to tuberculous infection than rabbits, and for this reason it might be expected that they would react even on greatly attenuated bacilli. The inoculations with a few exceptions were made intra-peritoneally, the punctures being always made in the posterior half of the abdomen on the left side. The cultures were derived partly from a guinea-pig inoculated with a piece of spleen from a tuberculous cow and partly from cultures furnished by Professor Mitschnikoff, of Paris. All had been cultivated upon glycerine agar and showed a vigorous development. The virulence of each of the cultures employed was tested on one each of the animals and after the last inoculation again tested with a parallel culture.

In the first series of experiments a culture seventy days old was dusted with europhen and placed in a thermostat at a temperature of 33°. Five guinea-pigs were inoculated. Inoculation with cultures subjected to the action of europhen for respectively seven and fourteen days caused death in ninety-three and one hundred and sixty days; the autopsy in the first animal revealing numerous bacilli, and in the second, only a few scattered ones in the glands. The animals inoculated with cultures acted upon by europhen for twenty-one, twenty-eight, and thirty-seven days respectively, showed at the autopsy no signs of tubercle or bacilli.

In the second series a culture fifty days old was exposed to the action of europhen vapor as described above and four animals were inoculated after an exposure of thirteen, twenty-seven, thirty-six and forty-four days respectively. The first of the four showed no signs of tuberculosis at the autopsy except three swollen mesenteric glands, the others, no tuberculous lesions of any kind.

In the third series a culture fifty-nine days old was scraped off and rubbed together with a concentrated solution of europhen in olive oil and allowed to remain in the dark at the temperature of the room. Before the inoculation it was stirred with a glass rod and injected in quantity of one cubic centimetre.

The inoculations were made after an exposure of the culture to the action of europhen oil varying from four to twenty-five days. The animal inoculated with the culture exposed for four days was killed one hundred and sixty-three days later. The others died after a period of from one hundred and three to one hundred and thirty-five days; all presented marked tuberculosus lesions.

Control experiments with pure cultures showed that no diminution of virulence had taken place after forty-four days, the animal inoculated at that time dying at the end of ninety days and presenting marked signs of tuberculosis, so that the diminished virulence of the cultures treated with europhen was not attributed to the action of time.

In a fourth series of experiments the influence of europhen upon tuberculous sputa was tested by rolling the infected sputa in quantities of one-half centimeter in the powder until it was completely covered. The sputa thus treated were placed in two hermetically closed glass jars, the one specimen (a) being kept at the temperature of the room, and the other (b) at 33°. The control guinea-pig died twenty-eight days after peritoneal inoculation with marked tuberculous lesions. Three guinea-pigs were inoculated with material from specimen (a) after exposure of the sputa to the action of europhen for a period of seventeen days, thirty-one and thirty-seven days respectively. Of these the first died in forty-seven days with marked tuberculous changes, the other two died in thirty-one and twenty-two days respectively of enteritis, no tuberculosis being present. Two animals were inoculated with sputa from specimen (b) after exposure to the action of europhen for twenty-six and thirty-seven days respectively and presented no evidence of tuberculosis three or four weeks later.

In Christmann's opinion these results demonstrate that europhen exerts a powerful germicidal action in all cases where the conditions were favorable to its decomposition, that is, the separation of iodine. This occurs not only when europhen is in direct contact with an aqueous substratum (as in series one and four), but also if it is present in an atmosphere surcharged with aqueous vapor, although not in direct contact with the culture (series one hundred and eleven), that in the latter case a considerable quantity of iodine is liberated as is clearly demonstrated by the following experiment:

A test tube is filled to a height of about three centimetres with water and without boiling sufficient starch is added that an undissolved residue settles at the bottom. Into this tube a smaller one half filled with europhen is placed, after which the larger receptacle is hermetically closed. If this is put in a thermostat there is observed at an early period a blue ring around the starch. It is possible, however, that in cases of "dry cultures" the action would have been correspondingly feebler.

It is entirely different with europhen oil. Notwithstanding the high percentage of europhen in the solution, while it could be positively demonstrated that a diminution of the virulence of the cultures had occurred at the end of four days this did not become more marked but remained stationary; the injection of bacilli subjected for twenty-five days to the action of europhen therefore produced almost the same lesions as those made at an earlier period.

This solution of europhen in oil is characterized by its stability. According to Goldmann, "when shaken with water it gives off a soluble combination of iodine."

This latter fact, in Christmann's opinion, explains the physiological action of the solution he believes, that in consequence of the moisture adhering to the bacilli a certain amount of iodine is set free from the solution; this decomposition, however, will be confined within very narrow time limits proportional to the quantity of water present, and for this reason the action of the iodine must be rapidly exhausted. After this has occurred europhen oil will act as an indifferent fluid.

According to the author the effect of europhen is due to the iodine set free which iodoform exerts a specific action. Troje aud Trangle have found that iodoform dissolved in olive oil destroys tubercle bacilli in three days; in the dry state rubbed together with the culture in some instances in fourteen days, but positively in three weeks, in the form of vapor not even after a month, but usually after fifty days. If iodoform was sprinkled on the culture and the bacilli produced a cold abscess, even after sixteen days action. On the other hand the above experiments show that europhen dissolved in olive oil has no marked effect even at the end of twenty-five days, but that when dusted on the culture it destroys the tubercle bacilli sometimes in fourteen days but positively in twenty-one days, and in the vaporous state in twenty-seven days, while in the latter case it considerably arrests their growth in thirteen days.—F. Christmann, M. D., in *Centralblatt fur Bakteriologie and Parasiten Kunde,* Volume XIII, Number XIII, 1893.

NEUROLOGY.

THE CENTRAL ORIGIN OF MANY FORMS OF NEURALGIC PAINS DEMONSTRATED BY THERAPEUTICAL RESULTS.

A MOST interesting study, even from a practical or therapeutical stand-point, is that of the true seat of neuralgic pain. The entire subject can be reduced to a single question. Is the pain of the different forms of neuralgia really originated at the very spots at which the patients complain of it, or is it simply felt at those spots as though it arose there, in the same way, for instance, as patients who have undergone amputation of a limb, still complain of pain in the stump although the limb, which was the seat and sole cause of their suffering, has been removed?

The former hypothesis seems probable *a priori,* and has given rise to the so-called peripheral theory of neuralgia; but a number of neuropathologists, and among them some very eminent men, defend what is known as the central theory of such suffering. Although there can be no doubt that the latter theory is not applicable to all cases, still it accounts for the greater number of them, and is based on arguments that are well fitted to carry conviction, and of which the principal ones are the following:

When a nerve has been completely severed, as is sometimes done in cases of neuralgia that defy all treatment, it is not uncommon to find the pain going on unchanged after the operation; it could not, therefore, have had a peripheral origin.

Just as no one disputes nowadays the existence of nutritive disorders in hysteria, in the same way no one can deny that in certain forms of neuralgia, without neuritis, the same kind of disorders may arise. Now, is not the most rational way of explaining these disorders that of granting the central theory of neuralgia? Under these circumstances it is easy to see that the morbid irritation extends from the original nucleus of the diseased nerve to the original nuclei of the neighboring nerves, which will manifest their implication by creating nutritive disorders *loco dolenti.*

In the third place, a number of diatheses, and certain altered conditions of the blood, give rise to neuralgic pains. Unless we admit that the spine is affected primarily, how can we understand why these diatheses and modifications of the blood should affect one nerve more than another, and in some cases, only a few centimetres, or even millimetres, of a given nerve?

Fourthly, it is known that neuralgic pains are connected very closely in different ways with hereditary neuroses. Now, the latter are undoubtedly localized in the nervous centres; how, therefore, could their effects be other than central?

The theory of the central seat of neuralgic pains explains most satisfactorily (and is the only theory that does so) the way in which such pains jump from one spot to another, alternate from one side to the other, and pass rapidly from this nerve to the next. We know how near to each other in the spinal cord are the original threads of the different nerves, and can consequently understand with readiness how the painful irritation of one nerve can extend with the greatest ease to its neighbor in the spinal cord.

After all, the daily practice of medicine supplies the central theory of neuralgic pains with a decisive argument. It is a matter of common occurrence that cases of neuralgia of the trigeminal, sciatic, or superficial nerves, that have stubbornly resisted the action of the various local anesthetics and different forms of counter-irritation, disappear after only a few days' use of bromidia. This result is readily explained by the well-known physiological effects of the active elements of bromidia, purified bromide of potassium and chloral, cannabis indica, and hyoscyamus; for it must be remembered that they act on the cerebro-spinal centres. Therefore, in the great majority of cases, at any rate, neuralgic pains have a central origin, and in this way is once more verified the truth of the old Hippocratic axiom. "*Naturam morborum ostendunt curationes,*" by the use of a preparation that is now so well known as to no longer require any praise—bromidia.—*Bulletin General de Therapeutique*, Paris, February 28, 1893.

OBSTETRICS.

STRYCHNIN DURING PREGNANCY AS AN AID TO LABOR.

JOHN MILTON DUFF, M. D., at the meeting of the Pittsburg South Side medical society, on February 13, 1893, made the following remarks in regard to the subject of "Tardy Labor." The discussion prompted him to speak of a remedy he has administered when occasion offered during the past few months. In speaking of it, he states that his observations have not been sufficiently numerous to justify him in giving a positive opinion. Nevertheless, whether by accident or otherwise, his results, so far in the majority of cases, have been most gratifying.

He referred to the administration of strychnin as a remedy preparatory to labor where there is general debility and want of muscular tone; in women who previously have had tardy labors from irregular and feeble uterine contractions and from want of tone in the auxiliary abdominal muscles; in women who have a history of post-partum hemorrhage, and of want of retraction and contraction of the uterus subsequent to delivery; in those who are subject to severe after-pains necessary for the expulsion of clots in the uterus. In all such cases a treatment should be instituted of one-sixtieth grain of strychnin three times a day, beginning from six weeks to two months prior to the anticipated time of delivery, and kept up until a week or ten days before delivery, when, if it is well borne, it may be increased, according to the judgment of the attendant, to one-fortieth grain or one-thirtieth grain and in some cases to one-fifteenth grain.

The cases in which he has administered it for the most part were those with which he had had experience of tardy labors, post-partum hemorrhage, and severe after-pains. In nearly all of them the improvement over past experiences was so great that the patients themselves were cognizant of it and expressed gratification.—*Therapeutic Gazette.*

PATHOLOGY.

ON THE PARASITIC NATURE OF CANCER.

In making an investigation into this subject it is necessary to take for comparison a condition where undoubted parasites produce changes in an organ or tissue which are equivalent to a new growth. For this purpose psorospermosis in the liver of the rabbit is generally admitted to be a typical condition, and a careful study of the changes found there, and the relation of the parasite to the newly formed tissue, should be fully determined in the first place, so that the process can be followed out in the cells of a growing carcinoma, where, from the arrangement of the tissues, this is infinitely more difficult.

On cutting into one of the small nodules found in the rabbit's liver, a substance can be expressed having a yellowish tint; this is found under the microscope to consist of large oval bodies, with others of smaller size varying in form, epithelium shed from the bile ducts, and leucocytes. On making sections through one of these nodules it is found to be composed of dilated bile ducts, the spaces in which are filled by masses of the material just described. The large oval bodies are seen, some free in the cavities, others wedged in between the epithelial cells lining them; the smaller, rounded forms occupy the same positions. It is evident that having proceeded so far, it is necessary to find some means by which these parasites in their various forms can be differentiated with absolute certainty from the cells of the bile ducts, for otherwise their relation to one another cannot possibly be determined.

This can only be done by double staining in such a manner that the parasites are colored distinctly from the cells of the part and their nuclei and this staining must be uniform throughout the section and not in patches, and every section must stain alike. After trying a large number of coloring agents I have succeeded in producing a double stain which will fulfill these conditions.

It is made as follows: Dissolve two cubic centimeters of anilin oil in ten cubic centimeters of cologne or rectified spirit, make up to one hundred cubic centimeters with distilled water, and filter. This makes practically a saturated solution. With this anilin water make a two per cent. solution of rosanilin sulphate for stain number one, and a one per cent. solution of iodine (not methyl) green for solution number two.

To use the stain, filter number one into a watch-glass, and place in it some sections of rabbit's liver which have been hardened in alcohol, and leave them in ten minutes. Remove, and wash them in water to remove superfluous stain, then wash slightly in ordinary alcohol and place them in a watch-glass of filtered number two. It is better not to time them in the second stain, but to take them out and examine in distilled water, and when the original red color has become changed to a dull purple the staining will have proceeded far enough. Then wash thoroughly in distilled water until all excess of color has been removed, then wash in ordinary alcohol until no more color comes away, clear in oil of cloves, and mount in xylol balsam. On examining a section prepared by the above method, it will be seen at once that there is no difficulty in differentiating the parasites from the tissues affected by them.

Appearances Presented by the Parasites.—(1) Large oval cells, each with a capsule stained slightly a dull red, having inside a mass of material which has been stained a brilliant red. (2) Shrunken, wrinkled capsules, some empty, some with a small mass of granular material in them, which, however, has not taken the bright red stain. A few of these empty capsules show a number of sharply defined black granules. (3) Large oval cells without a capsule, having a granular appearance, the whole stained slightly a dull reddish color. In addition to these are cells of the same character, but round in outline. These are probably the large oval cells in transverse section. These cells vary. Some show a coarse granulation amounting to a network, while in others the granulation is very minute. Some also show a small round nucleus. Their size also varies, but the smallest is many times larger than any single columnar cell lining the bile ducts.

Appearances Presented by the Altered Tissues.—A section through the dilated bile ducts shows a number of spaces or cysts lined with columnar epithelium, and into these spaces project papillomatous folds which branch and are also covered by columnar epithelium. These folds consist of fibrous trabeculæ, varying in thickness, having a homogeneous basement membrane on which the epithelium is situated. In the more delicate trabeculæ—that is, those most recently formed—the connective tissue is in process of development, and contains a large number of young connective-tissue corpuscles.

At the base of these folds this young connective tissue can be seen penetrating the liver substance and isolating the liver cells, so that in the substance of some of the folds one or more rows of liver cells are still left surrounded by connective tissue.

Action of the Stains on the Tissues.—The green stain has picked out all the nuclei by its action on the nuclear network, with the exception of the older connective-tissue corpuscles. By this stain the nuclei of the columnar cells covering the trabeculæ in folds are seen to be small, narrow, oval in shape, having a comparatively thick network; the nuclei of the liver cells at the base of the folds are much larger, round, or slightly oval, and have a finer network. The nuclei of the young connective-tissue corpuscles are of the usual character, and the leucocytes have taken the stain very deeply. These are the only elements stained by the green.

The fibrous tissue and protoplasm of the liver cells are stained a purplish red, and the protoplasm of columnar cells has taken the same tinge, the color being darker in the liver cells than in the other two.

The Relations of the Parasites to the Altered Tissue.—Taking a section which has been cut as thin as possible and in which the different elements have been differentiated as described above, we find, in the first place, a mass of parasites filling up the spaces between the folds, a number of them being a bright red, the others having only a faint tinge of dull red; amongst these are a number of desquamated columnar cells in various stages of disintegration; their nuclear network, however, is stained brightly with the green. There are also a number of deeply stained small round cells (green) which appear to be leucocytes. On examining the epithelium, we find wedged in between the cells a number of the parasites, some in the capsulated form a brilliant red, others a dull red, with no capsule. They are plainly wedged in between the cells, and reach down to the basement membrane. It is, however, a difficult matter to get at the exact relationship of one to the other in the section of the fully formed fold. But if we look for a small bile duct in which the process of dilatation is only just commencing, it becomes an easy matter to understand it. There are a number of small bile ducts to be found at the base of the folds which contain several parasites, and in proportion to the number of these has the process of dilatation advanced. In the smallest a few parasites are seen, one or two adult forms, while there may be five or six that have not developed a capsule; the majority, however, are free in the lumen of the duct, a few are wedged in between the cells. In some ducts the process has gone further, and small folds are just beginning to form, and in these ducts the lumen is much larger and the parasites more numerous. The relation of the parasites is, however, very plain, and by using a binocular microscope with a high power it can be ascertained beyond a doubt; the parasites that are wedged in between the columnar cells by their growth and presence cause desquamation and disintegration of contiguous cells, but in no case are they contained in the columnar cells. This would be a physical impossibility, as the smallest forms of the parasites are much larger than the columnar cells. It is, of course, possible for the parasite, in an early stage of its growth, to get inside a cell and expand it as it grows. I cannot, however, find any parasites small enough to do this, neither do any of the columnar cells show evidence of any displacement of their nuclei, which must take place if another body was growing inside them.

On examining some of the large cells that have no capsule, a few will be found which have had a portion cut off in making the section. These cells show a margin of granules, while the center is free from them. This shows that the granules are on the outer margin of the cells, and the binocular microscope confirms this view. We have, then, a large oval cell having a granular covering. On examining a number of these, it is at once apparent that this granular covering varies very much in different cells. In some it is very fine and difficult to make out, having scarcely any appreciable thickness, in others the granules are much larger and the coating is thicker. Further examination shows that this granular covering increases in thickness and in the size of its elements until definite patches are seen covering the cell. In some this change has gone on until the cell is almost covered; this is the development of the capsule, and the appearance described might easily be considered as the expansion of one cell by the growth of another inside it. All these stages in the development of the capsule can be seen going on in the spaces of the dilated bile ducts. It seems to me that this explains the view held by some that the parasite inhabits the cells of the bile ducts. If we consider the enormous number of parasites that are found free in the spaces of the dilated bile ducts, and the very small number that are found wedged in between the cells, also that every stage in development is going on in those lying free, and also take into consideration the fact that the smallest form of the parasite that we can detect is very much larger than the columnar cell of the bile duct, it seems to me that we must accept as a fact that the action of the parasites is simply one of chronic irritation caused by their rapid multiplication in the lumen of these vessels. This is a very important consideration, as we do not know how far, in many cases, new growths are produced simply by chronic irritation. I have seen several cases where horny growths which had existed for many years were converted into epitheliomata by the action of irritants. In another case, where lycopodium had been used as a dressing, I found the seeds deeply imbedded in a new growth. They may, of course, have had nothing to do with the formation of neoplasm. But in case of villous growth in the bladder removed by Sir Henry Thompson, I found a wheat-straw imbedded in its center. In this case I have no doubt the new growth was caused by the foreign body.

The next question to be considered is the cancer parasite and its relation to the cancer cell. On reading the recent literature on this subject, the first thing that strikes one is the diversity of opinion that exists as to the appearances presented by the parasite and its frequency, some observers finding it in every case in such numbers that it could be estimated by weight, while others found it in only about four per cent. of the cases examined. From the illustrations given, it would seem that all the observers were not looking at the same object. Some give special methods of hardening the tissue, while others found the parasite in material hardened in the usual manner. To test the value of these special methods, and find out what their action would be on tissues, I hardened portions of a fresh cancer by the methods used in my laboratory, and also by bichloride of mercury, osmic acid and Müller's fluid, and some other methods described by different observers; at the same time I hardened portions of normal ox liver by all these processes. Sections were made of all the material and stained with logwood, and also with the special stain I have already described. The sections of cancer and liver hardened in the usual manner showed the normal liver as it is known to be, while there was nothing to be seen in the sections of cancer which could be considered parasitic; but in the sections hardened in bichloride of mercury and in osmic acid and Müller's fluid, both liver and cancer were so much altered by the hardening process that it was not difficult to realize how the characteristic organism of cancer could be found and estimated by weight. Those observers, however, who have only found the so-called parasite in a small percentage of the cases examined, have not been describing effects produced by bad hardening; the appearances they have figured I have long been familiar with. They are, I think, capable of a different explanation than that given. I have gone over the large collection of cancer specimens I have made in the last fourteen years, and I find these appearances in only a few of them. In 1879, while working at karyokinesis, I obtained a specimen of cancer in the fresh condition, which, after hardening, showed in the section a number of very large cells. In these I found mitotic division most beautifully shown, but the process was going on inside the large cell; the original cell was enormously enlarged, its nucleus and some of its protoplasm pushed to one side, while in the centre was a small mass of protoplasm containing a nucleus. This nucleus, in various cells, showed all the stages of mitotic division, from the simple aster to two fully formed nuclei. I considered this to be a typical example of the endogenous division of cells. In 1886 I photographed this specimen amongst a number of others, showing various conditions in cancer development, and in 1891 I used this as an illustration of endogenous division in my work on "Practical Pathology and Morbid Histology." I have only a few cases in which this process appears.

For the purpose of studying the parasitic nature of cancer I have used cases where the development of the cells can be observed, such as in the axillary glands, where the process is secondary to carcinoma mammæ, and where the operation was performed in an early stage of the disease, and also in cases where recurrence had taken place and the growth had been removed twice or three times. In recurrent cancer of the breast small nodules are found in the muscles, and their development and relation to the muscular tissue is very interesting. Examining that portion of a section which shows the cancer cells invading the muscles, changes in the muscular fibres which are at some little distance from the cancer cells are at once apparent. Some of the fibres show spaces in their substance somewhat similar to the appearances found in striped muscle in cases of myxedema; in others, the muscle substance is completely broken up and the muscle corpuscle is seen as a shrunken nucleus surrounded by an empty space. All these changes take place before a single cancer cell is in apposition with the muscle fibre.

The next change is the appearance of one or two cancer cells in the centre of the broken-down muscle fibre. These increase until the fibre is replaced by cancer cells and the sarcolemma is either changed into fibrous tissue or is replaced by it. The method by which the cancer cells gain access to the centre of the muscle fibre is not apparent, and requires further investigation. In all these cases active growth of the cancer elements can be accurately observed, and I hold that where a pathological process is in an active stage of development, there the cause, if capable of demonstration, should be found. I considered that in these cases I ought to find the parasite, if the disease process were caused by one. The most careful examination of a number of cases has failed to show anything that could be construed into any form of parasite—that is, in those sections hardened by a method which gave normal appearances in sections of normal liver.

When we consider the many different forms of cancer, it does not seem possible that they can be the result of the action of any one form of parasite; and, further, when we study the differences between two forms, such as squamous epithelioma and glandular carcinoma, we find the differences so marked that, although they have certain points in common, yet they are practically different diseases. In squamous epithelioma we have a condition in which the epithelium receives some impetus at a certain point which causes it to grow downward into the tissue below, and there to branch out in every direction. It is at the one point, however, that the growth takes place, and the newly formed epithelial tissue will grow sideways under the normal epidermis without having any effect on it. It has also no effect upon the fibrous connective tissue into which it grows, as a rule. I have, however, seen an enormous hyperplasia of yellow elastic tissue produced by the growth of an epithelioma in the eyelid.

On the other hand, we have a glandular carcinoma, starting in secretory epithelium, and consisting of cells derived from this epithelium, and in every case this new growth affects the fibrous connective tissue in such a manner that a supporting framework is formed for it as it grows, and in this are contained new blood-vessels, for its nourishment. Although these two forms differ so much in their construction, there is one point of absolute resemblance between them. A cell from either form, on being carried to a distant organ, will at once reproduce a cancer of the same type as that from which it started. It therefore follows that if a parasite is required, it must be the cell itself; but that gives no explanation as to how the first cancer cell became cancerous.

Sarcoma must be considered on an entirely different basis. Where I have been enabled to examine a sarcoma in its earliest condition, that is, where a young growth is starting in connection with an established sarcomatous condition, I have found that it always consisted of embryonic connective tissue, and, according to my observations, all mesoblastic neoplasms begin in this way. Whether they receive the impetus which decides that they are to become sarcomata or to remain benign at the commencement or later in their growth, would seem to vary in different cases.

Conclusions.—(1) The dilatation of the bile ducts in the liver of the rabbit is caused by the chronic irritation produced by the multiplication of the coccidium oviforme (Leuckart) in them, and the appearances which have given rise to the view that these parasites are developed in the columnar cells of the bile ducts are caused by the different stages in the development of the capsule.

(2) The appearances found in a small percentage of glandular carcinomata are caused by endogenous cell-formation; the large majority of glandular carcinoma show nothing which can be considered parasitic when hardened by any method which, when applied to normal tissue, will give a typical normal section.—Heneage Gibbes, M. D., in *American Journal of the Medical Sciences.*

MEDICAL MELANGE.

WE request the attention of our readers to Messrs. John Wyeth & Brother's advertisement, in this issue, relating to their effervescent lithia tablets, ophthalmic discs, beef juice, liquid extract of malt, etc.

SEQUELÆ OF MEASLES.—Dr. R. B. McCall says (*Medical Standard*) there are frequently present indications for the employment of iron, strychnia and cod-liver oil. Elixir iron, quinia and strychnia is a very eligible preparation, which, with one of the tasteless mixtures of cod-liver oil, or, what may prove more satisfactory than the oil, petroleum in the form of that elegant pharmaceutical triumph called terraline. Of course gastric and intestinal indigestion must be looked after and corrected as far as practicable. In not a few cases a change of climate works marvelous improvement.

We have received a number of samples of Upjohn's friable pills. These pills are in reality finely divided powders enclosed in a capsule, which by pressure with the thumb can be crushed and reduced to powder. The coating is stated to be composed of sugar: it is very soluble, for we find that the enclosed powder is set at liberty in a very short time after the pill has been placed in water. We specially note that the contents of the pil. ferri (Blaud) give every indication of being in the state of protosalt, and in the permanganate of potash pills the permanganate is apparently unaltered. The pills are well finished, and have a very attractive appearance.—*British Medical Journal.*

THE SENSITIVENESS OF THE PERITONEUM.—Tait (*Lancet*, January 21, 1893) believes that the peritoneum is exquisitely sensitive, as shown not only by the severe pain experienced by patients during a sudden internal hemorrhage, but by the agony which they suffer when it is necessary to open the abdominal cavity without anesthesia. Moreover, he has frequently noticed that, on touching the peritoneum in women who were incompletely anesthetized, reflex movements were frequently produced, indicative of the pain which was experienced. He addressed inquiries to several different abdominal surgeons, many of whom expressed an opinion directly contrary to his own. Sutton believes that while the healthy peritoneum is not especially sensitive, when inflamed it is highly so. —*American Journal of the Medical Sciences.*

GLUE-COVERED CELLULOSE: A SUBSTITUTE FOR WALLTUCH'S WOOD-GLUE SPLINTS.—Hübscher (*Correspondenzblatt für Schweizer Aerzte*, 1892, Number XXIII) recommends cellulose as an excellent material for splints. The cellulose is prepared from wood by a chemical process. For the preparation of splints a model of plaster-of-Paris is first made. After being cut in suitable paterns the cellulose is moistened in tepid water, laid upon the plaster model and smoothed out with the hand, after which a gauze bandage is neatly applied. After drying, either in the air or in an oven, the splint is removed from the cast, a layer of glue is applied, the splint is returned to the model and another layer of the cellulose put on. After being thoroughly dried, the cast is lined and provided with hooks for lacing. It is advised to perforate the splint and to varnish it. The advantages of cellulose splints are their simplicity of preparation and their elasticity and durability.—*American Journal of the Medical Sciences.*

PAINFUL PREGNANCIES AND SUBINVOLUTION; THEIR PREVENTION.—"The busy practitioner," says W. F. Kier, M. D., of Saint Louis, Missouri, "is constantly impressed with the fact that the habits of life of the average woman in the direction of constipation, improper clothing, tight-lacing, over-strained nerves, and undeveloped, flabby muscular system, tends toward pelvic congestion and plastic exudations in the reproductive organs, inducing a class of lesions, such as metritis, metrorrhagia, ovarian neuralgia, pelvic cellulitis, as well as being the direct cause of painful pregnancies, after-pains and subinvolution. Have we a handy remedy, easy of administration, which will assist us in anticipating and preventing these evils? According to my experience we have. Do you ask me what it is? It is ponca compound, furnished to us in tablet form, each tablet containing: extract ponca, three grains; extract mitchella repens, one grain; caulophyllin, one-fourth grain; helonin, one-third grain; viburnin, one-eighth grain. It commended itself to me some years since, and each year's success has confirmed the correctness of my early conclusions, so that after extensive clinical experience I am convinced that it exercises a specific alterative action on the uterine tissues, a general tonic influence on the pelvic organs; that it has a tendency to absorb plastic deposits, to regulate the vascular supply, to relieve congestion, to encourage peristalsis of the bowels, and to remove spasmodic conditions. In fact, we have in the ponca compound that which is uniform, portable, convenient, reliable and agreeable, indeed, 'a definite chemical compound.' I confidently commend it to my co-workers of the medical profession."

THE diet of an infant whose mother cannot properly provide for it, or while it is being weaned, is always a matter worthy of careful attention by physicians, and especially is this true in cases where the child is naturally weak or suffering from cholera infantum, marasmus, or any of the summer complaints affecting the digestion and assimilation of nourishment. You have doubtless found the use of cow's milk in such cases more or less unsatisfactory. That the milk for calves is not intended in its raw state for infants is proven by the variance in its chemical composition from mother's milk and the inability of many infants to digest the excess of casein which it contains, without the use of animal ferments usually more or less unpleasant or of uncertain purity. Then again, especially in large cities, it is almost impossible to obtain pure, fresh cow's milk which the purchaser feels certain to be free from disease germs, and neither adulterated, skimmed nor diluted. Even if the milk is accepted, the difficulty of keeping it sweet during warm weather or the inconvenience of its sterilization makes its use a source of annoyance and trouble. These objections to the use of milk must necessarily apply to such prepared foods as require the addition of cow's milk to make them complete and nutritious. Condensed milk preserved with cane sugar is still farther from the mark. For use in such cases we would recommend to the notice of the physician malted milk, a pure and simple milk food consisting of fresh, sterilized cow's milk, obtained from one of the choicest of Wisconsin's dairy districts and an extract of malted grain, combined and evaporated at low temperature in vacuo and put up in the form of a powder in sealed glass packages. In this food the casein of the milk is partially predigested by plant pepsin obtained from the grain which is malted by a special process. By the simple addition of water, without cooking or trouble, you obtain a fluid closely resembling mother's milk and equally as nutritious, free from starch or cane sugar, a palatable food relished by all infants and retained by the weakest stomach. It makes an excellent diet for the nursing mother also, increasing and enriching the lacteal flow.

CINERARIA MARITIMA IN CATARACT.—R. P. Banergee reports (*Calcutta Medical Reporter—Medical Review*) several cases of cataract cured by the use of the juice of this plant, which is indigenous to India. In each case the opacity cleared away in a very short time. In commenting upon these the author remarks: Knowing that the natives of this country used the fresh juice of the plant in cataract (*motiabind* or *nazala*) with good results, I gave it a trial (because I have no eye instruments here and the cases were unwilling to undergo any operation) the results being successful. Also in the *Pharmaceutical Journal* for May, 1888, one or two cases of cures have been noted. And I hope that practitioners in larger cities where they have better chances with patients unfit for operation, or unwilling to undergo such, would give the drug a fair trial. The plant is very common here, one variety called the *cartwheel* (cineraria maritima or grandiflora) is cultivated as a pot plant in the garden. The other variety, with red or purple, and green stems, called in Hindu *kukrainda* (C. Hybrida vel exotica), grows near the bases of old pucca brick buildings during the rains and early winter, and are mural plants, very common in the northwest provinces and Bengal. The application causes no pain beyond a little sensation of heat, lasting from three to five minutes.

THE DISTRIBUTION OF THE BACILLI OF DIPHTHERIA IN THE HUMAN BODY.—The opinion has been generally entertained heretofore, that the bacilli of diphtheria were localized in the false membrane characteristic of the disease. Frosch (*Zeit. f. Hygiene* XIII, 1893, page 49) gives the results of his investigation of fifteen fatal cases of diphtheria. In five of these the specific bacteria were not found in the internal organs, in the other ten the diphtheria bacilli were isolated from the blood and various organs. The bacteriological examinations were made as soon as possible after the death of the patient. The ordinary method of making agar plates was employed. In some of the cases the baccili were unusually distributed through the body, as indicated by their isolation from the blood, spleen, liver, kidneys, cervical and bronchial lymphatic glands, lung (when hepatized) pericardial and pleuritic effusion, and the brain. In a few cases they appeared in the cultures from spleen or kidneys only. Babes, Kolisko, Paltauf, and Spronck, are the only observers who have made similar observations in the past. The results obtained by Frosch bring out with clearness a very important fact in the pathology of diphtheria.—*Medical and Surgical Reporter.*

THE DIAGNOSIS OF LOVE.—Dr. James Finlayson, in an historical review of Herophilus and Erasistratus, quotes a story from Plutarch concerning the latter. Antiochus, son of king Seleucus, fell in love with his stepmother, the young and beautiful Stratonice. His condition was extremely unhappy. He made the greatest efforts to conquer his passion, but they were of no avail. At last he resolved in his despair to rid himself of life by neglecting all care of his person and abating from food; for this purpose he made sickness his pretense. Erasistratus easily discovered that his distemper was love, but it was difficult to conjecture who was the object. In order to find out he spent whole days in his chamber, and whenever any beautiful person of either sex entered it, he observed with great attention not only his looks, but every part and motion of the body which corresponds most with the passions of the soul. When others entered he was entirely unaffected, but when Stratonice came in, as she often did, either alone or with Seleucus, he showed all the symptoms described by Sappho, the faltering voice, the burning blush, the tumultuous pulse, and at length, the passion overcoming his spirits, a *deliquium* and mortal paleness. Erasistratus concluded from these tokens that the prince was in love with Stratonice, and perceived that he intended to carry the secret with him to the grave. He saw the difficulty of breaking the matter to Seleucus, yet depending upon the affection which the king had for his son, he ventured one day to tell him "that the young man's disorder was love, but love for which there was no remedy." The king, quite astonished, said: "How! love for which there was no remedy!" "It is certainly so," answered Erasistratus, "for he is in love with my wife." "What, Erasistratus!" said the king, "would you who are my friend, refuse to give up you wife to my son when you see us in danger of losing our only hope?" "Nay, would you do such a thing," answered the physician, "though you are his father, if he were in love with Stratonice!" "O my friend," replied Seleucus, "how happy should I be if either God or man could remove his affections thither! I would give up my kingdom, so I could but keep Antiochus." He pronounced these words with so much emotion, and such a profusion of tears, that Erasistratus took him by the hand and said: "Then there is no need of Erasistratus. You, sir, who are a father, a husband, and a king, will be the best physician, too, for your family." Upon this Seleucus summoned the people to meet in full assembly, and told them it was his will and pleasure that Antiochus should intermarry with Stratonice, and that they should be declared king and queen of the Upper Provinces. For the cure of the young prince Erasistratus is reported by Pliny to have received a fee of one hundred talents, which is calculated as amounting to more than one hundred thousand dollars.—*Boston Medical and Surgical Journal.*

COMMERCIAL MEMORANDA.

L. B. Grandy, M. D., demonstrator of anatomy and microscopy, Southern medical college, Atlanta, Georgia, says: "Antikamnia has given me the most happy results in the headaches and other disagreeable head symptoms that have accompanied the late catarrhal troubles prevailing in this section. In my practice it is now *the remedy* for headache and neuralgia, some cases yielding to it which had heretofore resisted everything else except morphine. I usually begin with ten-grain dose, and then give five grains every fifteen minutes until relief is obtained. A refreshing sleep is often produced. There seem to be no disagreeable after-effects."

Prophylaxis of Cholera Asiatica.—I have been prescribing preventive medicine for diphtheria for many years and have never had a second case develop. When diphtheria appears I have made it a constant practice to put all those exposed to infection upon listerine, taken in drachm doses at each meal; and during the three years of la grippe I ordered my family and all my friends' families to use it after each meal, as long as there were any cases in our city. I did not once fail in preventing both diphtheria and la grippe when listerine was taken faithfully. In several instances persons being called from home neglected the listerine preventive treatment and returned in a week or two with la grippe fully developed. I believe that the only safe quarantine against cholera is to quarantine the alimentary tract, and for this purpose I shall trust to listerine. It will prevent diphtheria and la grippe, and I feel sure it will prove equally efficient in the preventive treatment of cholera.—J. H. Stringfellow, M. D., professor of hygiene, Northwestern medical college, Saint Joseph, Missouri.

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

THE ANTITHERMIC EFFECT OF THE COOL BATH.

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[PUBLISHED IN The Physician and Surgeon EXCLUSIVELY]

In October, 1890, J. C. Wilson, of Philadelphia, one of our most enthusiastic advocates of the Brandt treatment of typhoid fever, wrote of it as follows: "In this country it would be at present impracticable to introduce the treatment to any great extent in private practice; but the publication of statistics which are incontrovertible, and which prove that the average mortality can be reduced from its present figures of perhaps sixteen per cent. to two or three per cent., will in a short time render the employment of baths practicable both in public and private practice." Time has indeed proven the accuracy of Dr. Wilson's prophecy, for no radical therapeutic measure is more rapidly gaining ground in America than the hydriatic treatment of typhoid fever.

Two and a half years ago I began the use of the Brandt baths in Saint Mark's hospital. The treatment at first met with little favor, but thanks to the intelligent and enthusiastic coöperation of the superintendent of our training school, the method soon demonstrated its great usefulness, and the cool bath treatment of typhoid fever is now a well-established therapeutic procedure in this city in both hospital and private practice.

In an article entitled "The Brandt Method of Treating Typhoid," published in The Physician and Surgeon of July, 1892, I stated that "The antithermic effect of the cool bath is as beneficial in pneumonia, pleurisy, any of the acute exanthemata, or any febrile disease, as in typhoid fever. In any sickness in which the fever attains a considerable height, or is of considerable duration, the cold water treatment is not only justified but is one of the very best remedies at our command." In support of this assertion I wish to report the following cases, together with one of typhoid fever.

Case I—Typhoid fever.—Maggie K, a servant girl aged sixteen years, was in excellent health until about September 1, 1892, when she began to complain of headache, loss of appetite and strength. September 7 I found her temperature 102°, pulse 120, tongue coated, abdomen somewhat tympanitic, bowels constipated. The diagnosis of typhoid fever was confirmed during the next few days, and I removed her to Saint Mark's hospital September 11. She was ordered milk diet, nitro-muriatic acid (chemically pure) three drops every four hours, and a bath of 70°, of fifteen to twenty minutes' duration, every three hours when the rectal temperature registered above 102°. Beginning at 6:30 P. M., three baths were given before midnight as follows:

Temperature before the bath, 104°; after the bath, 102.8°.
" " " " 104°; " " " 104°.
" " " " 105°; " " " 104.6°.

September 12: Seven baths were given; water, 68°; duration, seventeen minutes.

Temperature before the bath, 104.6°; after the bath, 103.6°.
" " " " 104.4°; " " " 102.4°.
" " " " 104.4°; " " " 104°.
" " " " 104.2°; " " " 102.4°.
" " " " 105 °; " " " 103.8°.
" " " " 105 °; " " " 103.8°.
" " " " 104.6°; " " " 103.6°.

Patient's pulse being weak and rapid, 120 to 126 per minute, and reaction after the baths being slow, one-half ounce of whisky was ordered after each bath.

September 13: The temperature of the baths was reduced to 60°, and duration lengthened to twenty minutes; bowels not having moved for two days, an enema was given; pulse, 128 to 140. The thermometric readings for the day were:

Temperature before the bath, 104.8°; after the bath, 103°.
" " " " 104.8°; " " " 102.8°.
" " " " 103.6°; " " " 102.4°.
" " " " 104 °; " " " 103.8°.
" " " " 104.4°; " " " 102.4°.
" " " " 104 °; " " " 104°.
" " " " 104.4°; " " " 101.2°.
" " " " 104 °; " " " 101.6°.

Patient complains of pain in left chest, and has a troublesome cough.

September 14: The reductions after the baths are quite satisfactory, the maxima, however, remaining high. Seven baths of 60° were given to-day, as follows:

Temperature before the bath, 104.6°; after the bath, 101.2°.
" " " " 104.4°; " " " 101.6°.
" " " " 103 °; " " " 102.4°.
" " " " 104 °; " " " 102°.
" " " " 104.2°; " " " 102.8°.
" " " " 104.8°; " " " 103°.
" " " " 104 °; " " " 103.8°.
" " " " 104 ° at 9 P. M.

In spite of the reductions of temperature, the fever ascends rapidly after each bath. The patient spent most of the day shivering, and reacted very poorly from the cooler baths. Her hands, feet and legs were continually cold; the surface of the whole body was blue, and she rested but little, so at 9 P. M. I placed her in a REISS or continuous warm bath. This consists of immersing a patient in a bath of 88° whenever the rectal temperature reaches 102°, and allowing him to remain day and night, if necessary, until the temperature falls to 100°. He is then removed from the bath, and replaced in it when the temperature again reaches 102°. At 11 P. M., owing to a severe chill, the patient was removed from the bath, the rectal temperature having fallen 2°.

September 15: At 12:30 A. M. the temperature had risen to 104.6°, and she was again placed in the REISS bath. At 2 A. M. the temperature was 102.2°; at 4 o'clock, 101.8°; at 6 o'clock, 101.6°; at 8 o'clock, 101. Owing to her inability to sleep while continually immersed in water, she was now removed, and the cool baths resumed as follows, beginning at 10 A. M.:

Temperature before the bath, 103 °; after the bath, 101.4°.
“ “ “ “ 104 °; “ “ “ 101.4°.
“ “ “ “ 104.4°; “ “ “ 103.°
“ “ “ “ 104.2°; “ “ “ 101.6°.
“ “ “ “ 104.2°; “ “ “ 101.8°.

Pulse to-day from 140 to 152.

September 16: The baths are beginning to be more effectual, both temperature and pulse being lower, an unmistakable morning remission is observed, and the patient shows positive signs of improvement. Pulse, 124 to 140; temperature as follows: baths, 60°; duration, fifteen minutes.

Temperature before the bath, 103.6°; after the bath, 101.°
“ “ “ “ 102.8°; “ “ “ 101.6°.
“ “ “ “ 103.8°; “ “ “ 102.4°.
“ “ “ “ 104 °; “ “ “ 102°.
“ “ “ “ 104.6°; “ “ “ 102°.
“ “ “ “ 104 °; “ “ “ 102.8°.
“ “ “ “ 103.4°; “ “ “ 102.4°.
“ “ “ “ 104.2°; “ “ “ 101.4°.

A marked improvement, so that the condition of the patient no longer excites any apprehension.

September 17:

Temperature before the bath, 103.4°; after the bath, 101.8°.
“ “ “ “ 102.6°; “ “ “ 101.2°.
“ “ “ “ 102.4°; “ “ “ 101°.
“ “ “ “ 103 °; “ “ “ 101°.
“ “ “ “ 103.2°; “ “ “ 102.4°.
“ “ “ “ 104.2°; “ “ “ 102.2°.
“ “ “ “ 103.4°; “ “ “ 101.6°.
“ “ “ “ 103.8°; “ “ “ 101.8°.

Bowels move naturally once a day, and patient sleeps nicely between baths.

September 18: Baths of 70°; fifteen minutes' duration.

Temperature before the bath, 103.8°; after the bath, 101.6°.
“ “ “ “ 102.6°; “ “ “ 100.6°.
“ “ “ “ 102.8°; “ “ “ 101.4°.

Temperature before the bath, 103 °; after the bath, 100.2°.
“ “ “ “ 103 °; “ “ “ 102°.
“ “ “ “ 103.2°; “ “ “ 102.4°.
“ “ “ “ 103 °; “ “ “ 101.6°.
“ “ “ “ 104.4°; “ “ “ 101.6°.

September 19: Condition satisfactory. Treatment the same.

Temperature before the bath, 104.4°; after the bath, 101.6°.
“ “ “ “ 102.8°; “ “ “ 99.6°.
“ “ “ “ 102.4°; “ “ “ 101.6°.
“ “ “ “ 102.8°; “ “ “ 99.6°.
“ “ “ “ 102 °; “ “ “ 101°.
“ “ “ “ 102.8°; “ “ “ 101.2°.
“ “ “ “ 102.8°; “ “ “ 101°.
“ “ “ “ 102.8°; “ “ “ 101.2°.

September 20: Patient's general condition excellent. No bath required at 6 A. M. and 6 P. M.

Temperature before the bath, 102.4°; after the bath, 100.8°.
“ “ “ “ 102.2°; “ “ “ 100.6°.
“ “ “ “ 102.6°; “ “ “ 100.6°.
“ “ “ “ 102.2°; “ “ “ 98.8°.
“ “ “ “ 103.6°; “ “ “ 100.6°.
“ “ “ “ 102 °; “ “ “ 99°.

September 21: But four baths were required to-day. Patient began to complain of pain in her feet; was very restless and wakeful. Small doses of bromide and chloral were given her, and lead and opium wash applied to her swollen feet.

Temperature before the bath, 103 °; after the bath, 99.6°.
“ “ “ “ 102 °; “ “ “ 99.4°.
“ “ “ “ 102.4°; “ “ “ 101.2°.
“ “ “ “ 102.4°; “ “ “ 100°.

September 22: Patient frequently cried on account of the severe chilblains in feet and legs, in relieving which hot fomentations frequently repeated proved most successful. Temperature reached 102° but once to-day.

September 23: Patient slept well last night. Highest temperature to-day, 100°.

September 24: Temperature normal all day. The patient made a rapid recovery and left hospital October 6, having received seventy-four baths.

This was certainly a grave case of typhoid fever. The battle with the fever lasted from September 11 to 15; defervescence began on the 16th, and convalescence was established on the 24th, thirteen days after the beginning of treatment.

Case II—Pleurisy.—Wm. J., an epileptic, aged twenty-eight years, was admitted to the hospital January 10, 1893. Two days before he was seized with a severe stabbing pain in the region of the liver, which compelled him to go to bed. His abdomen was tympanitic; tongue coated; bowels constipated. The pain is increased by coughing and deep inspiration, and extends from the margin of the ribs on the right side to the crest of the ilium. Percussion of the right side is normal, but auscultation reveals numerous fine râles at the base of the right lung. Temperature at 8 P. M. was 102.6°; pulse, 144; respiration, 29. He was ordered milk diet, a sufficient quantity of sulphate of magnesium to move the bowels, and one-eighth of a grain of morphine hypodermically *pro re nata.*

January 11: Patient slept quite a little after 12 o'clock midnight, and feels better this morning, although complaining considerably of the pain in his side. Temperature at 8 A. M., 102.2°; pulse, 140. At 12 M., temperature, 104°; pulse, 134. Sponge baths were ordered to reduce his temperature, and if they failed to do so, cool baths were to be employed.

January 12: Patient slept well after a cool bath at midnight, and feels better; required but two hypodermics of morphine during the day. Three baths were given as follows:

12:30 A. M.—Temperature before the bath, 104.8°; after the bath, 102°.
Pulse before the bath, 134; after the bath, 120.
2:00 P. M.—Temperature before the bath, 103°; after the bath, 101.4°.
Pulse before the bath, 128; after the bath, 116.
11:00 P. M.—Temperature before the bath, 103°; after the bath, 102.2°.
Pulse before the bath, 130; after the bath, 128.

January 13: No bath was required to-day; the pain in the right side is slowly disappearing; tongue is less coated; patient is getting hungry. Friction sounds can be heard higher up in the back; also in front at end of deep inspiration.

January 14: Patient feels but little pain in the right side to-day. He is beginning to feel some in the left side of the chest, however, and auscultation reveals friction sounds at the side and front of lower part of left lung; strapping the chest with broad strips of adhesive plaster entirely relieves him of pain. The temperature early in the day showed no increase, but in the evening suddenly rose to 103°. At midnight a bath was given.

Temperature before the bath, 104°; after the bath, 100°.
Pulse before the bath, 142; after the bath, 124.

January 15: Patient passed a very comfortable night, and is feeling much better. Only one bath required to-day.

January 16: Patient's temperature is normal to-day. He has no pain in either side of chest and is hungry. He was soon walking about, and progress towards recovery was uninterrupted until January 29, when the pain in his left side suddenly became severe, requiring strapping of chest again, and his temperature rose to 103.2°. Two baths were given, and the next day, January 20, his temperature again became normal. His convalescence took a rapid course, and he was discharged from the hospital February 13. A few days later he sailed for Europe. No exudation was at any time found in either pleural cavity.

Case III.—Lobar pneumonia.—John L., an iron moulder, German, aged thirty-three years, weight one hundred and seventy-two pounds. No tubercular history. Had a mild attack of pneumonia when twelve years old; another when nineteen years of age; and a very severe attack three years ago, at which time he was in my care. Has never had any other illness excepting bronchial cough which has existed since childhood.

About 4 P. M. June 6, he had a severe chill, followed by fever, cough and pain in the left side of his chest. The next morning I was called and found him suffering from pneumonia in the lower lobe of the left lung. Examination of the chest revealed slight dullness on percussion over the base of the left lung, and feeble respiratory murmurs with numerous crepitant râles. I prescribed several small doses of calomel, to be followed by a saline, and tablets of tincture of aconite one minim, sulphate of morphia one-twentieth grain, tartar emetic one-fiftieth grain, and ipecac one-eighth grain, one to be taken every hour. Later on DOVER's powder was used to control the cough and pain, digitalis to improve the cardiac action, belladonna as a tonic to the vaso-motor system, and strychnia as a stimulant to both cardiac and respiratory centers.

June 8: There was a marked increase in the vocal fremitus over the affected area, with marked dullness on percussion, and bronchial breathing. The case progressed satisfactorily until June 11, when I found the patient delirious and in great distress. He had not slept during the night; his temperature and pulse were higher than before; his pain and cough were increased. The sputum had become darker and thinner. The upper lobe of the lung now presented fine crepitant râles; the entire lung was invaded by the disease, and the patient had taken a decided change for the worse. So I sent a nurse and tub to the house, and the remainder of the day he was bathed as follows:

12 M.;	water, 85°;	20 minutes;	before bath,	temperature, 103 °;	pulse, 120.
			after bath,	" 102.8°;	" 110.
2:30 P. M.;	" 76°;	17 "	before bath,	" 104 °;	" 122.
			after bath,	" 103.7°;	" 115.
5 P. M.;	" 70°;	15 "	before bath,	" 104 °;	" 122.
			after bath,	" 103 °;	" 112.
8 P. M.;	" "	" "	before bath,	" 104.5°;	" 136.
			after bath,	" 102.6°;	" 118.
12 P. M.;	" "	18 "	before bath,	" 103 °;	" 120.
			after bath,	" 101.8°;	" 112.

The patient was much pleased with the effect of the treatment. His headache and delirium were much relieved; skin became moist; his expectoration improved in character and became looser; cough was less troublesome; and he slept quietly after each bath. His respiration became slower and his pulse stronger.

June 12: The patient's condition is materially improved to-day. His pulse and temperature are lower than yesterday; he becomes quite restless and a little delirious when his fever is highest, but this is regularly relieved by a bath; and he complains less of the pain in his side. Consolidation of the lower lobe of the lung is complete, but percussion shows only slight dullness over the upper lobe, and bronchial breathing has not yet appeared. Only three baths were required in the twenty-four hours, as follows:

5 A. M.;	water, 70°;	17 minutes;	before bath,	temperature, 102.8°;	pulse, 116.
			after bath,	" 100.6°;	" 104.
2 A. M.;	" "	18 "	before bath,	" 102.8°;	" 114.
			after bath,	" 102 °;	" 112.
7 P. M.;	" "	16 "	before bath,	" 102.8°;	" 120.
			after bath,	" 101.8°;	" 120.

June 19: Contrary to the rule, which is, that patients with lobar pneumonia are generally most ill the day before the crisis, Mr. L. feels comparatively comfortable to-day, especially after each bath. His urine has increased considerably

in quantity since the baths were begun. The respiratory murmur over the upper lobe of the lung is feeble; there are many crepitant râles to be heard, but no bronchial breathing. Percussion is slightly dull. Three baths were required as follows:

4:00 A. M.;	water 70°;	17 minutes;	before bath,	temperature, 103.4°;	pulse, 124.
			after bath,	" 101.8°;	" 112.
8:30 A. M.;	" 70°;	16 "	before bath,	" 103.2°;	" 120.
			after bath,	" 102° ;	" 110.
6:00 P. M.;	" 70°;	17 "	before bath,	" 103.1°;	" 120.
			after bath,	" 102° ;	" 109.

June 14: The patient's temperature continued to fall after his last bath and is normal to-day. The disease in the upper lobe fell short of consolidation. thus offering valuable evidence in support of the view of Dr. Simon Baruch, that lobar pneumonia can be aborted by the early use of cold baths.

Having taken this man through an attack of pneumonia three years ago, an unusual opportunity is afforded of making comparisons between different methods of treatment in the same person. The patient himself has done this, and is strongly in favor of the treatment employed during his last illness, which differed from that used in his former attack only in the addition of the cool baths. While but one lobe of his lung was involved three years ago, both lobes were included in his last attack. Yet the patient was less dangerously ill; he was in much better condition both before and after the crisis; and his convalescence was more rapid, he being detained from his work but four and a half weeks, while after his illness three years ago he was unable to resume work until after the lapse of seven weeks.

Case IV.—Puerperal pyemia: hyperpyrexia.—A detailed account of this remarkable case will be found in the *Medical Age* of May 25, 1893, under the title of "A Unique Case of Puerperal Sepsis, with Comments" by Dr. Schuyler C. Graves. The case presents many points of interest apart from the results of the use of cool baths, but I shall refer only to so much of the history as is deemed necessary to illustrate the beneficial effect of cool bathing.

Mrs. F. H. B., aged twenty-six years; primipara; was confined February 14, 1893. February 22, the patient had a chill followed by a temperature of 103°, and signs of inflammation of the left breast. The chill and fever were repeated on the 23d. On the 24th, the temperature remained between 104° and 105° throughout the day and shortly after 10 o'clock P. M., rose to 105.5° and the pulse to 130. About midnight a violent chill occurred, followed by a rectal temperature of 108.3° and pulse 200, counted at the heart. I then saw the case in consultation. The patient was in a very critical condition, and death seemed close at hand. The pulse was very weak; the skin dusky and bathed in perspiration; the patient was wildly delirious; and involuntary twitching of the muscles of the entire body was present, particularly those of the face, and the upper and lower extremities. The most rational indication seemed to be to reduce the hyperpyrexia. A tub was therefore procured, but before the patient could be placed in the bath three one-quarter-grain hypodermics of morphia were required to quiet her enough to render her removal and retention in the tub possible. Five baths were given as follows, the temperature of the first being 90° gradually reduced to 75°:

2:00 A. M.;		20 minutes;	before bath,	temperature	108.3°;	pulse	200.
			after bath,	"	102.5°;	"	160.
4:30 A. M.;	water, 75°;	17 minutes;	before bath,	"	103.7°;	"	160.
			after bath,	"	101.9°;	"	136.
7:00 A. M.;	" 75°;	17 "	before bath,	"	103.7°;	"	140.
			after bath,	"	103 °;	"	128.
10:00 A. M.;	" 70°;	15 "	before bath,	"	103.3°;	"	138.
			after bath,	"	102.1°;	"	132.
4:00 P. M.;	" 70°;	15 "	before bath,	"	103.4°;	"	130.
			after bath,	"	101.5°;	"	110.

The temperature at six P. M. was 99°, and no more baths were required. The effect of these baths was just as remarkable upon the general condition of the patient as upon the temperature. She was very delirious during and after the first bath, and had to be held under the water. After the second bath the delirium was much less and the muscular twitching ceased. After the third bath her mind became perfectly clear and remained so. She then enjoyed the baths and wanted them more frequently than they were required. Her pulse, which was at one time imperceptible at the wrists, became stronger as well as slower, and refreshing sleep was soon induced.

The patient's progress towards recovery was uninterrupted until March 1, when the right parotid gland became inflamed, and finally suppurated. This was incised March 6. Convalescence was again interrupted about March 16, by the appearance of pain and swelling in the left lower extremity, which passed away after a couple of weeks' treatment with flannel bandaging and rest. The patient was soon in her usual health.

It was my intention to report a few more cases illustrative of the beneficial effects of cool baths in several other acute diseases, but I shall have to defer them to some other time.

I wish to say, however, in closing, that the acute diarrheal diseases of infancy offer a very large field of usefulness for the employment of hydriatic treatment. I have many times seen the clinical aspect of a case of acute gastro-intestinal catarrh or acute entero-colitis completely changed by the giving of a few cool baths, together with the withdrawal of milk, the substitution of egg water or meat broths, and the administration of large doses of subnitrate of bismuth. Only a few days ago I saw a baby with acute entero-colitis with a temperature of 105°. The child was placed in a bath of 90°, which was gradually reduced to 80°, and in about ten minutes, while it was still in the water, its little head lopped over in its mother's hands, and the babe was aleep for the first time in over twenty-four hours. One hour after taking the bath its temperature was 100°.

What I wish to plead for is the intelligent use of cool baths in acute diseases attended with high fever, in connection with whatever other therapeutic procedures are indicated. Water is of great value as a therapeutic agent, but should not be used to the exclusion of other well recognized therapeutic agents. Hydrotherapy should be well understood and the potency of its remedial powers recognized by all scientific physicians. Moreover, it should be sharply distinguished from hydropathy, or the use of water by empirics as a universal remedy for all diseases.

INDICATIONS FOR TREATMENT IN LACERATIONS OF THE CERVIX UTERI.*

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I do not bring this subject before you at this meeting with the expectation of presenting anything startlingly new, so much as with the hope that I may induce greater accuracy in diagnosis of the lesions accompanying this injury. In order that we may not bring the art of surgery into disrepute, but rather that we may continually elevate it in the estimation of the public, it is necessary that we be careful that our performance equal our promise. The foundation of accuracy and success in surgical work lies in the accuracy of our diagnosis. In order that we may undertake a case with definite ideas of what we expect to accomplish, it is necessary that we have definite ideas of the conditions that exist and their pathological tendencies. I am well aware that absolute accuracy is not attainable at all times; but absolute accuracy of diagnosis should be our endeavor in all cases, however trivial.

So it is with lacerations of the cervix uteri. It is not enough to say that because a laceration exists, all existing nervous manifestations are dependent thereon and removable by its repair, as many pathological conditions coëxist with, and are consequences of, cervical lacerations and must be relieved before cure can be promised.

In discussing the natural history of lacerations of the cervix uteri, I will group them under the following four heads: unilateral, bilateral, stellate, and irregular. All these varieties are due in the great majority of cases to childbirth, by reason of one or more of several causes:

(1) Unnaturally strong and frequent pains, especially when connected with a cervix unusually firm.

(2) Premature use of the forceps.

(3) Premature use of the membranes.

(4) Unnecessary manipulation of the cervix. By this I mean the too common habit of digital dilatation. This, while it is praised and practiceed by many, I consider unnecessary and prejudicial to the best interests of the patient; as, while it may relieve her more speedily from present suffering, it is very liable to entail years of ill-health, by being the cause of laceration of the cervix, with its consequent evils. The irritation caused by the localized and forcible pressure of the dilating finger causes spasmodic contraction of the circular fibres of the cervix, with increased force in the contractions of the longitudinal fibres. Continued manipulation of this nature causes also inter-fibrillar infiltration of the circular muscles and this weakens their resisting power.

When a solution of continuity in tissues occurs, nature immediately institutes a process of repair. When the torn or cut surfaces remain in apposition and otherwise healthy, repair is accomplished by a process known as "first intention." When, for any cause, this is impossible, the same object is attempted by granulation. In the prevention of union by first intention, infection is the most powerful and most constant factor. Let a small particle of septic material find lodgment between the torn surfaces, and a process of suppuration is instituted which effectually prevents union. As reason for the failure of primary union in cervical lacerations, much weight is generally placed on the fact that close apposition of the torn surfaces is prevented by the weight of the uterus, and by the contraction of the circular fibres of the cervix. But I am of the opinion that infection is by far the most important factor; and when labors are so aseptically conducted that the lochial discharges are free from pyogenic germs, post-puerperal laceration of the cervix will be much less common.

As I have said above, when union by first intention is not accomplished, a process of granulation is instituted with more or less imperfect results. Imperfect repair of the lacerated wound gives rise to a variety of pathological conditions which may, however, all be grouped under four heads:

(1) Laceration with cicatricial tissue at the angle of the wound.

(2) Laceration with eversion and possible erosion of the lips.

(3) Glandular enlargement or cystic degeneration of the cervix.

(4) Subinvolution of the uterus with consequent chronic inflammation of the body of the uterus and the endometrium, with resultant displacements.

On any surface, where there is a laceration of tissue, which is left to heal by granulation unaided by modern antiseptic appliances, there is an exudation of "plastic material" which fills the tissues more or less widely around the wound. When a laceration of the cervix occurs, this same process takes place, and the connective tissue which underlies the mucous membrane and surrounds the glands and muscular fibres is filled with plastic material, much of which organizes and forms an excess of connective tissue which is more or less contractile. At the angle of the wound the reparative efforts are greatest, and granulations are formed which finally become organized.

It has been thought that this "cicatricial plug" is super-sensitive, but this is certainly not the fact in all cases. Whether new nerve fibres are prolonged into this new tissue with new blood-vessels, has not been sufficiently demonstrated. I think it more probable that the symptoms which are generally referred to this cicatricial angle, are, in reality caused by compression of nerve fibres in tissue adjacent, by formation and contraction of this plastic exudate which is poured out in such quantities in the immediate neighborhood of the wound. It has been argued that too much importance has been placed on this newly formed scar tissue and that it is no more sensitive than scar tissue in other parts of the body; that the symptoms commonly referred to the laceration and the consequent results of reparative effort are, in reality, due to other conditions, more particularly chronic metritis and uterine displacements. But, gentlemen, this same chronic metritis, and these various uterine displacements are in the majority of cases consequences of cervical lacerations. The tissue of the cervix uteri is much firmer than most tissues, and therefore its nerve fibres are much more subject to compression by plastic exudate than would be the case in looser tissue. Again, it is not claimed that a laceration uncomplicated by pathological conditions other than cicatricial tissue, causes local symptoms; its symptomatology is entirely reflex in character, but may be so severe, and of such a nature as to result in chronic invalidism, without any local indications of disease. And when there are local symptoms of pain, heaviness, et cetera, you may expect other conditions, possibly metritis or displacements.

The second form of laceration that I have mentioned, namely, that form characterized by eversion of the lips of the cervix, and erosion, seldom exists uncomplicated by some other pathological condition. That is, there is invariably more or less cicatricial tissue, as described above; and there is generally an accompanying condition of chronic cervicitis, with subinvolution of the entire uterus. This condition of eversion is brought about by varied forces. If, by reason of infection, or other cause, primary union, or union by first intention fails, granulation occurs. Then, by reason of the weight of the uterus, and other forces, the lips of the wound are drawn apart. There is thrown out also an abundance of this plastic material, more especially under the mucous membrane of the canal, and this, with the underlying connective tissue becomes thickened, simultating true hypertrophy. This necessitates an out-rolling of the lips, so that finally the vaginal face of the cervix is obliterated, and the presenting part is endocervical mucous membrane—a condition of eversion. But it often happens that this exudate is so free as to thoroughly infiltrate the tissue and loosen the epithelial layer of this exposed endocervical membrane. Then, by reason of friction or acrid discharges, it becomes easily removed, constituting "erosion." The importance of noticing thus carefully the causation of these conditions is, that we may keep in mind the fact that it is a consequence of laceration and to be remedied permanently only by operative measures. In addition to the reflex symptoms mentioned with the first condition, there are in this case certain local symptoms, which need only to be mentioned to be understood, namely, leucorrhea more or less profuse, yellowish in character, and sometimes flecked with blood; occasionally a sensation of heaviness, and generally more or less tenderness. These are the main local symptoms that we are to expect in laceration with erosion, when it is not complicated by other pathological conditions. But coëxisting with this state of eversion and erosion, is generally more or less disease of the glands of the cervix. In fact, long continuance of this condition results naturally in glandular or cystic degeneration of the cervix as it is called, in which the entire face of the cervix appears to the palpating finger or to the eye to be studded with small, hard bodies, variable in size and number—distended glands.

Normally there do not appear to be any glands in the tissue of the cervix, except such as are found in the cervical endometrium. And how to account for their presence has not been positively determined. The most probable explanation is that by the excessive proliferation of new tissue beneath the mucous membrane of the canal not only does eversion and consequent erosion occur, but, as this tissue gradually contracts, the ducts of the glands become obliterated and the glands themselves distended by their own normal secretion. This same result is also aided in another way. After the normal epithelium of the cervical canal is destroyed, it often becomes replaced by the pavement epithelium of the vaginal portion of the cervix, resulting in closure of the ducts of the glands and their consequent distention. But, however it may occur, the fact is the same, that in cases of long standing severe cervical laceration, there is almost invariably more or less glandular degeneration of the cervix, sometimes so severe as to almost obliterate normal cervical tissue.

The fourth condition that I have named—that of subinvolution and consequent displacement—is by no means rare, and is an important element in prognosis as to recovery after repair of the causative laceration.

For the purposes of repair of injuries involving a solution of continuity of tissue, an increased supply of blood is demanded. When a laceration is repaired by "first intention" this increase is transient and does not materially affect the vascular conditions of the uterine body; but when the process of granulation is instituted, the vascular equilibrium of the entire organ is disturbed, and the normal process of involution is ultimately arrested, leaving the organ large and abnormally soft and therefore easily displaced. As involution becomes arrested, more or less of plastic material is exuded from the veins of the entire uterus, and undergoes the same gradual organization into new connective tissue that occurs in the neighborhood of the laceration. Whether this process is in any degree inflammatory and thus properly denominated metritis, or whether it is non-inflammatory and more properly called "areolar hyperplasia," I will not attempt at this time to discuss. The fact remains that the organ is at first large, soft and filled with plastic exudate, especially in the neighborhood of the lining mucous membrane, and ultimately becomes hardened and contains an abnormal proportion of new connective tissue which constricts blood-vessels, presses on nerves and sets up glandular degeneration of the corporeal endometrium.

It will not be advisable in this paper to attempt any discussion of the etiology or pathology of uterine displacements, further than to say that they are especially prone to occur when the uterus is in a state of subinvolution, when it is abnormally heavy and soft and the ligaments themselves may not have regained their normal tone. Coëxistent with displacement of the uterus, which indeed is the causative factor, is very frequently prolapse of one or both ovaries and tubes. As a consequence of these displacements the vascular conditions in the broad ligament are changed, venous engorgement is induced with very frequently a varicosity of the veins of the pampiniform plexus. All these conditions may result from a laceration of the cervix uteri, and are to be kept in mind when making our examination. But while all these may be direct consequences of such laceration, its repair will in no sense correct them. It is this fact that has been too frequently forgotten, and an operation which in a simple uncomplicated laceration should result in great good, has brought only disappointment to both operator and patient. It is therefore by no means a simple question as to when and how to operate for laceration of the cervix, but rather involves accuracy in diagnosis, knowledge of the pathology of the various conditions found, and good judgment as to the best method of meeting the various indications.

The symptoms caused by cervical lacerations and their consequences may be divided into two general classes, local and reflex—often coëxistent, and are valuable as aids to a diagnosis which can only be completed by physical examination. The nerve supply of the uterus is mainly sympathetic, and principally from the inferior hypogastric plexus. The nerve supply of the cervix is mainly through what is called the cervical ganglion, lying between the cervix and rectum, and composed of filaments from the upper sacral nerves and sympathetic fibres.

In normal conditions the uterus, and especially the cervix, are very slightly sensitive. Tenderness on pressure, or sensations of pain at any part of the uterus are indicative of pathological changes. Whether sensation is an attribute of some sympathetic fibres, or whether it is due to the presence of cerebro-spinal fibrillæ, is not positively determined. Certain it is that sensation is an attribute of uterine tissue, and that under certain conditions normal painless sensation may be changed to acute pain or tenderness. Also is it true that impressions received at the terminals of uterine nerves may be transmitted to points far distant and there felt as painful sensations, without any consciousness of pain at the point of origin. From this it follows that there may be marked laceration of the cervix with serious reflex disturbances, without the existence of any local symptoms. We may then deduce the conclusion that when symptoms referable to the pelvic organs are noticed, there exists some lesion other than mere laceration.

We come thus to inquiring what condition of a laceration of the cervix will give rise to merely reflex symptoms and what those symptoms are. It is undoubtedly true, as the experience of all will attest, that a marked unilateral laceration with cicatricial tissue at the angle and sides may exist without subinvolution, chronic metritis, endometritis or displacement, and in such case there may be absolutely no local indications of pelvic disease, and yet the woman be an invalid and incurable, except by the repair of the tear. In such case the condition of invalidism is brought about by reflex irritation of the nervous system, which irritation may be manifested in too many ways to enumerate. By means of the abundant supply of nerve fibres, mainly sympathetic, which are distributed to the cervix, an intimate connection is established with the entire nervous system, and as a result of cervical irritation there may be a great variety of nervous reflexes. The more common are a feeling of general nervousness, irritability, a sensation of impending evil, with perhaps mental depression. This may be associated with gastric disturbances which do not yield to ordinary remedial measures. Or there may be various neuralgias—supraorbital or facial—with a frequent sensation of pain in the back of the neck, vertex and base of the brain. Palpitation of the heart, without sufficient apparent exciting cause, restless sleep, unpleasant dreams, and so forth. These and many more are common consequences of a simple laceration of the cervix uteri, but are by no means pathognomonic. But with the presence of a laceration and the absence of any appreciable lesion of any other organ, it is fair to infer a causative influence in the laceration. And experience has abundantly shown that such inference is just.

These reflexes, I have said, arise from some local irritation of the nerve fibres which terminate in the cervix, and are undoubtedly caused by compression of these fibres by newly formed connective tissue at or near the laceration.

All the complications of a simple laceration may intensify these reflex manifestations, but will also cause local symptoms, namely, a sensation of weight and fullness in the pelvis, dragging sensations in the groins, backache, leucorrhea, menstrual derangements, and so forth. Leucorrhea generally indicates endometritis, either partial or general. Menorrhagia and metrorrhagia generally indicate—

(1) Enlargement of the uterus from some cause.
(2) Inflammation or some form of degeneration of the lining membrane.
(3) New formations, benign or malignant; and
(4) Disease of the appendages.

A sensation of weight and fullness in the pelvis with dragging sensations in the groins is generally indicative of—

(1) Enlargement of the uterus.

(2) Displacement of the uterus.

(3) Displacement of the tubes and ovaries.

(4) A varicose condition of the veins of the broad ligaments—a condition by no means rare.

But these symptoms may also be caused by movable kidneys, chronic intestinal catarrh and displacement, or rectal engorgement.

The cause of backache may be found either connected with the bladder, the uterus, the ovaries and tubes, or the rectum.

From this it follows that in a case where local symptoms coëxist with reflex disturbances, a mere repair of the laceration will seldom be sufficient to bring full relief.

A careful, painstaking and intelligent examination of the abdomen and pelvis should precede a diagnosis, and reparative procedures should be based on an intelligent estimate of the pathological conditions found.

No specific directions can de given which will apply in all respects to every case, as each one has peculiarities of its own.

The one general rule to be borne in mind is to restore all parts as nearly as possible to normal, removing abnormal tissue, correcting displacements, and remembering that the natural forces are great assistants.

In the first of the four pathological consequences of laceration that I mentioned, namely, laceration with cicatricial tissue at the angle of the wound, simple removal of all cicatricial tissue, and bringing the surfaces together, will be all that is required. This, too, will suffice in some cases of the second group—those complicated with eversion of the lips and erosion. Free removal of the tissue in proximity to the lacerations, leaving enough mucous membrane in the center of each lip to form a new canal, and uniting the raw surfaces accurately, will often be all that is necessary. But this condition is very often accompanied by chronic inflammation of the entire endometrium. In such cases rapid, careful dilatation and thorough curetting of the entire lining membrane must precede reparative procedures on the cervix. But if there be cystic or glandular degeneration of the cervix, more thorough measures must be used.

The presence of the distended glands in the cervical tissue is a constant source of irritation, and these, with the new tissue about them, must be removed. This will generally necessitate the amputation of both lips of the cervix. For this purpose many operators strongly advocate the use of the cautery knife, claiming better results than by any other method; but to me it does not seem right. Our aim is to remove abnormal tissue and to restore the cervix to as nearly normal conditions as possible. In nearly all of these extensively glandular cervices the laceration is bilateral at least, there has been extensive eversion; and what seems to be the cervix is largely new connective tissue underlying an everted cervical canal. Therefore, the method I employ is that known as Schroeder's, which consists in revivifying the surfaces of the lacerations, as in the ordinary operation; then a transverse incision through the internal mucosa, sufficiently low down to get below the diseased glands; then another incision (transverse) at the edge of the normal cervical tissue, which incision extends downward to meet the internal incision, thus removing a wedge-shaped piece. The outer lip is then infolded and united closely to the internal, and the original lacerations closed, thus forming a new and shapely cervix. But in this operation care must be exercised to prevent closure of the entire canal by union of the anterior and posterior lips, for which purpose it is well to introduce a stem, glass or hard rubber, and retain it by a suture. Cleveland's glass stem is perhaps the best for this purpose.

For the fourth form—laceration with subinvolution (without displacement)—nothing further is needed than those procedures already mentioned, namely, rapid dilatation, thorough curetting, and the thorough repair of the laceration. By this process involution is reëstablished, and the uterus returns to its normal conditions. But when complicated by displacement something further is needed. In retro-displacements, without adhesions, the measures above mentioned must be supplemented by an Alexander's operation as modified by Edebohls. Concerning no operation are there more diverse opinions than this of Alexander. Many good operators whose words carry authority pronounce it utterly worthless for permanent relief; but I know that, if properly performed, it is better than anything else that has been devised.

The limits of this paper will not permit me to describe it fully, nor to enter into a discussion of its merits. It is only applicable to those cases where there are no adhesions. But when there is a densely adherent, retroverted uterus, I am a strong advocate of abdominal section by means of which adhesions can be broken up, displaced ovaries restored to their normal position, and the uterus anteverted either by shortening the round ligaments, or (which I consider better) by fixing its fundus to the abdominal wound. By such procedures nearly all cases of abnormal conditions following a laceration can be remedied and health restored.

I am avoiding the discussion of disease of the appendages, as the field is too large. But they must be considered carefully in your preliminary examination, and in many cases must be thoroughly treated before operative measures can be safely instituted.

A CASE OF CHLORAL AND MORPHINE INEBRIETY ASSOCIATED WITH INSANITY.

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Dr.——, of C——, was admitted to Sunnyside private hospital, acutely insane as the result of long addiction to chloral and morphine. From daily small doses he had reached ninety grains of chloral hydrate and six grains of morphia per diem, and had continued this for nearly three years. Had been addicted to the use of chloral and morphia, in all, six years.

Upon admission he had hallucinations of sight and hearing and many changing delusions. He was very pale, weak and anemic, and his heart's action was irregular and weak. He eat very little and was sleeping none at all, and seemed likely to die promptly without very vigorous measures were instituted for his relief. As he was too weak to treat as we generally treat patients, by commencing at once a reductionary plan of treatment, a preliminary plan of treatment was adopted. The indications were to correct existing gastric and hepatic disturbances, to form a proper elimination of excretory products through the kidneys, and to increase cardiac nutrition and vitality and conserve the patient's strength and make him sleep. Also to see that the condition of primary assimilation, which consists of the changes which proximate principles undergo previous to their conversion into the blood, was properly carried out, and likewise with regard to secondary assimilation, which consists of all the changes by which portions of the blood are converted into organic tissue and are again removed from the system by a retrograde metamorphosis. The chloral was withdrawn from the first, paraldehyd (MERCK) being given in two drachm doses at bed-time to induce sleep. Hot milk and Valentine's meat juice were given each hour, alternating with hemoglobin compound, which was also given in hot milk.

The patient was put to bed under the care of a trained nurse, and only allowed to get up in the evening when a prolonged warm bath at a temperature of 100° with cold to the head was administered. The following pill was administered to correct the existing gastric and hepatic disturbances, favor a proper elimination of excretory products through the kidneys, increase cardiac nutrition and vitality and improve the strength and rhythm of the heart's action.

℞	Caffein Hydrochlor., - - - - - -	ʒss.
	Strychniæ Sulph., - - - - - -	gr. i.
	Extract. Belladonnæ, - - - - - -	gr. iss.
	Fel Bovis insp., - - - - - - -	ʒi.
	Extract. Colocynth. Comp., - - - - -	gr. xxx.
	Extract. Aloes, - - - - - - -	gr. xxx.
	Extract. Taraxaci, - - - - - - -	gr. xv.

Misce et fiant pil. numbera xxx. Signa—One three times a day.

This pill acted admirably on the heart, and the strength and rhythm of the heart's action was very soon much improved, also the cardiac nutrition and vitality. The following pill was now administered every two hours.

℞	Zinc. Valerianat., - - - - - - -	ʒi.
	Extract. Belladonnæ, - - - -	gr. ss.

Misce et fiant pil. numbera xxx. Signa—One every two hours, the same diet being kept up. Quinine was administered in two grain doses before each meal, or morning, noon and night.

In a week it was deemed safe to commence regular treatment. The paraldehyd in two drachm doses with the warm baths had induced sleep, and the patient was much better for the withdrawal of the chloral from the method of treatment. The daily allowance of morphia was now reduced to four grains and a gradual reductionary method commenced, while at the same time sodium bromide was commenced in twenty grain doses three daily, and as the morphine was decreased, the bromide was increased, until at the end of [illegible] the reduction of morphine being commenced, the patient had come down to [illegible] grains [illegible] all of morphine and one hundred grains of sodium bromide in a [illegible] water [illegible] was strong, [illegible] the [illegible] commencement [illegible] word [illegible] and as I [illegible] nature of which I impressed with [illegible] chloride of iron was given as a tonic during the reductionary treatment of the morphine addiction. As soon as I had reached the maximum of sedation and the minimum of morphia and complete withdrawal, I administered warm baths, electricity, one-fiftieth grain of nitro-glycerin internally, and a hypodermic of one-fourth grain of sulphate of sparteine at the same time to relieve the psychosomatic suffering caused by withdrawal of the morphia, and the patient was put on a tonic containing tincture of iron, strychnia, digitalis, and glycerin. Spirit of nitrous ether was given for two days, also, after complete withdrawal, to further the rapid elimination of the bromides, although they had caused a pretty free diuresis at the time of maximum dose.

The patient was now free from the drugs which had caused his insanity, and doing well, but the mental derangement itself had not yielded. He was now put on maltine and the hypophosphites, cod-liver oil, iron, arsenic and strychnia and zinc oxide; the latter in two-grain pill three times a day. The warm baths were continued at night with cold to the head, and the patient taken out of bed, dressed, and made to take exercise in the sunlight and fresh air daily, and spend most of his time out in the grounds of the institution. Mustard was applied to the inside of the wrists daily for its counter-irritant effect, and the galvanic current of electricity applied daily as centric galvanization, and ether poured on the head daily to affect the cervical sympathetic. Under this treatment the patient gained thirty pounds of flesh, and was discharged four months after admission perfectly restored to health with no craving for drugs and a normal will power.

LECTURES.

HICCOUGH ASSOCIATED WITH HYSTERIA.—EFFICIENCY OF THE GALVANIC CURRENT IN CONTROLLING THE SPASMS.

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Gentlemen: As you look at this patient you see she is affected with hiccough. The paroxysms are fairly regular, about fourteen to eighteen times in a minute. She is nineteen years of age, a Bohemian by birth, and has recently come to this country. She says that the disorder began two days ago. She was alighting from a street car, when the vehicle suddenly started before she had stepped down. She was not thrown, nor did she fall, but simply had to step rapidly and was greatly frightened. At once the hiccough began and has continued without interruption during the waking hours. You notice that the spasm is painless, though the patient looks distressed and worried. We learn that she has had two similar attacks, the first one some three years ago and the second about one year later. The second attack lasted about four months, the disorder passing off gradually. Of the previous attacks one was caused by fright and the other followed a fit of anger in which she was greatly excited.

Singultus or hiccough is essentially a clonic spasm of the diaphragm in which the glottis is suprised, as it were, and a column of air is forced through and against the vocal cords, while they are in varying states of tension and approximation. This accounts for the wide difference in pitch of the sound as observed in different cases. About the same range of pitch and the same rhythm are observed in the same patient. In this girl the contractions run fairly even, from fourteen to eighteen in the minute. Cases have been noted in which the spasms reach the enormous total of one hundred in the minute.

Of the exact pathology of this condition we know little. By the older writers it was regarded as an involvement of the phrenic nerve and diaphragm. This was denied by **Bright** and **Romberg**, the former having seen two cases of disease of the phrenic nerve in which there was no sign of hiccough. Later writers have again come to the conclusion that there is some involvement of the respiratory center, which is reflected along the phrenic nerve, and there is considerable evidence that changes in the nerve trunk or its endings may cause the disorder. A study of the clinical cases so far reported shows a wide variation in etiology. As a symptom occurring in the continued fevers, cachexia and other constitutional states it is frequently of the gravest importance. When it occurs in nervous women accompanied by hysteria, as it is in this case, it need excite no apprehension. There is usually little or no pain, simply some discomfort. It lasts for days, months, and even years. One case described by **Romberg** had existed for six years.

In these cases the trouble may be exceedingly rebellious to treatment. In the lighter forms of the trouble such simple methods as holding the breath, making a number of deep and quick inspirations, or rapidly swallowing a liquid, may be sufficient to interrupt the paroxysms. **Cruveilhier** mentions two cases of severe singultus that were relieved by having the patient's head held downward and backward, and then pouring water into the mouth, partly suffocating the patient and causing violent reflex vomiting and coughing. In the milder and more persistent cases, associated with hysteria and neurasthenia, the associated disorder must be treated, therefore we shall direct for this patient nerve tonics and iron to improve the evident anemia. Electricity has been mentioned as efficient in controlling the spasms. **Bartholow** recommended the faradic current applied along the attachment of the diaphragm. A strong current applied in this way, you see, causes a violent contraction of the upper portion of the abdominal muscles, but, as you observe, no diminution of the spasm. The constant current applied with the positive pole at the back and root of the neck and the negative pole at the epigastrium causes the number of spasms to fall to four in the minute. As soon as the current is discontinued, they increase and reach the full number. Accordingly we shall put this patient on a general tonic treatment and direct the application of the constant current daily.

EDITORIAL ARTICLES.

DEFENSIVE MECHANISMS.

Among the excellent addresses by the chairmen of different sections at the recent meeting of the British medical association the one delivered by **Professor Roy**, of Cambridge, dealing with the defensive mechanisms of the body, will be found full of interest.

The defensive mechanisms are called into activity only when a part or whole of the system is endangered, and are most numerous in those parts most subject to attack. In the respiratory tract they abound from the mucous membrane of the nose to the intricate adjustments of the pulmonary circulation. To begin even to enumerate the defenses of which the body makes use when but one part is endangered, necessitates an extensive review of physiological processes. Taking the digestive apparatus for example, besides the multifarious minor chemical and mechanical defenses, there is first the important mechanism demonstrated by vomiting, whereby harmful substances are ejected from the system. Then there is the increased peristalsis of the intestines, whereby peccant matters are extruded. Then, also, there is the increased secretion of hydrochloric acid, whose value as an antiseptic agent in destroying microbes has recently been demonstrated in all experiments dealing with microbic infection.

The phenomena of inflammation, accompanied as they are by the operation of such processes as phagocytosis and the bactericidal and globulicidal action of serum, would afford innumerable examples of defensive reactions on the part of the organism.

PROFESSOR ROY gives considerable prominence to pain as a protective mechanism of the body, one which has a fixed anatomical substratum apart altogether from the tissues which regulate the nutrition or specialized functions of the body.

The nerves which convey impressions of pain are distinct from those conveying tactile impressions, and their function is to call into activity the resistance of the organism as a whole against local attack. No one who has thoroughly studied pain will believe that the throbbing pain of an inflamed part is a useless and gratuitous torture. It must subserve some good purpose in the organism. Continuous pain undoubtedly inhibits muscles which would otherwise be reflexly excited, and this produces rest. The reflex influences of pain on vaso-motor centers thus modifying blood-pressure must also be considered among the beneficial results accredited to pain.

The protective nature of pyrexia is too large a subject for cursory consideration; but opinion is rapidly coming to regard fever as a reaction process whose primary protective intent is admitted.

The position occupied by these protective mechanisms enhances our conception of the value of nature's *vis medicatrix*, and suggests that derangements of these mechanisms may be as full of import as derangements of the nutritive or reproductive mechanisms. It also suggests that much pathology may be comprised in regarding many organic phenomena as the outcome of these derangements.

EDITORIAL BREVITIES.

THE PAN-AMERICAN CONGRESS.

THE Pan-American congress is a thing of the past. From the independent stand-point it may be described as having been somewhat of a fizzle. A few representatives of the South American republics attended. One small hall would have contained them all. The multiplicity of sections divided the attendance to an extent that left scarcely a quorum in many departments. The congress discussed many important matters, and will by no means have been barren of results, and will, in addition, have been useful in illustrating certain erroneous principles upon which such a gathering can be brought together. This will be of use to those who may be projectors of similar assemblies in the future.

THE HEALTH OFFICER OF DETROIT.

AFTER much apparently unnecessary circumlocution, the Detroit board of health have elected a health officer. It required delicate diplomacy, endless deliberation, persistent balloting, and a wholesale slaughter of candidates, to reach this simple and beautiful result. If the election had been by a college of cardinals choosing a Pope, it could not have been involved in more apparent difficulty. The various candidates lived in an atmosphere of perpetual scrimmage. Their friends became fire-eaters. Most of the candidates were permitted the privilege of hoping to the last. The board are to be congratulated upon the way they performed their duty. There is an element of heroism in yielding to the inevitable gracefully, and had they not been compelled to elect some one the one hundred and fifty-ninth ballot would probably still be in progress. The candidate who has successfully emerged from this conflict must feel like Monte Christo, that the world is his. He certainly deserves congratulation, and it is to be trusted he will receive the support of the profession in maintaining and enforcing every necessary sanitary regulation and in the initiation of every new and needed reform.

ELECTROCUTION.

IMPROVEMENTS in methods of electrocution do not come so readily as might be wished. The execution of William G. Taylor at Auburn, New York, was a sorry affair. The condemned was placed in the chair, and a current of twelve hundred and twenty volts passed through him. His heart stopped and no pulse was found until thirty seconds after the contact; then a thready pulse was felt and the unfortunate gasped. A second contact was signalled for, but the apparatus was out of order and no current came. The condemned man was put to bed, resuscitated, and then, under the influence of chloroform and morphine, subjected to a second contact which fortunately was fatal. The bungling which has occurred in this and other electrocutions will, it is to be feared, restrict the universal adoption of what is still maintained. to be by its advocates, the most humane and scientific method of carrying out the death penalty.

THE VALUE OF QUARANTINE.

THE value of quarantine will probably be tested during the next few weeks. The refusal of England to sign the convention adopting quarantine at the Dresden conference, will probably lead Europe to a realization of the superiority of isolation methods over quarantine. The sporadic cases of cholera which have reached British coasts have all been promptly isolated, and the horrors of quarantine have been avoided. The quarantining of persons arriving on infected ships was only agreed to on the understanding that this measure would only be pursued after persons had returned to their own homes. The tendency in Europe has been to limit the time for quarantine, and a better understanding of the precautions comprised in isolation, will probably result in its speedy abandonment.

MEDICAL NEWS.

Dr. Henry H. Darst, of Toledo, Ohio, aged seventy-two years, is dead.

The Sisters of Mercy at Grand Rapids, Michigan, will erect a new hospital.

The Dominion medical association convened in London, Ontario, September 20 and 21.

Dr. H. R. Varney, formerly of Burlington, Vermont, has become a resident of Detroit.

Dr. Oliver Wendell Holmes celebrated his eighty-fourth birthday on August 29.

Dr. C. D. Aaron has been elected professor of anatomy in the Detroit college of medicine.

Accidents to life and limb cost the railroads of this country twelve million dollars a year.

D. Tod Gilliam, M. D., of Columbus, Ohio, is the inventor of a new aseptic vaginal speculum.

A cannulated surgical needle has been invented by Dr. W. T. Hamilton, of Irouaton, Alabama.

Dr. Benjamin Ward Richardson, of London, recently received knighthood from Queen Victoria.

The late A. J. Drexel bequeathed one hundred thousand dollars to the German hospital of Philadelphia.

Pennsylvania is the first state to turn over the entire control of quarantine matters to the federal government.

Suicidal mania, dependent upon hot weather, is said to have been prevalent in London and Paris this summer.

Dr. Joseph Schulte tendered his resignation as a member of the Detroit board of health on the 25th ultimo.

The eightieth annual meeting of the Vermont state medical society will be held at Rutland, October 12 and 13.

The twenty-fourth annual meeting of the medical society of Virginia will be held at Charlottesville, October 3 to 5.

The Northern Ohio district medical society held its annual meeting in Fremont, on Thursday, September 21.

Professor J. M. Charcot, the Paris neurologist, died at Morvan, France, on August 15. He was born at Paris in 1825.

It is a penal offense in Texas to give a prescription for whisky without first examining the person to be prescribed for.

A famine is raging in Shan-Si, a province of China. The dead and dying frequently fall into the hands of cannibals.

The medical library at Washington, District of Columbia, contains fifty thousand volumes and seventy thousand pamphlets.

THE postmaster-general has decided that disease germs are not mailable and must not be transmitted through his department.

A MEDICAL school will be established in Boston by the trustees of Tuft's college. Both sexes will be admitted to scholarship.

THE Protestant hospital association has recently been incorporated at Duluth, Minnesota, with a capital of fifty thousand dollars.

DURING the present year the board of health of New York City has destroyed four million pounds of bad meat, fish fruit and vegetables.

MICROSCOPIC examinations have demonstrated the presence of the bacilli of tetanus and tuberculosis in dust from the streets of Naples.

THE *Quarterly Atlas of Dermatology* is a new publication emanating from Saint Louis. A. H. Ohmann-Dumesnil, A. M., M. D., is its editor.

DR. LEWIS A. SAYRE, of New York, recently had an operation for cataract performed on one of his eyes. The procedure proved successful.

BY the will of the late Samuel B. Coyl, Saint Luke's hospital, Detroit, comes into the handsome inheritance of two hundred thousand dollars.

DR. S. P. DUFFIELD, ex-health officer of Detroit, will return to Dearborn, his former place of residence, and resume the practice of his profession.

DR. J. S. PYLE, of Canton, Ohio, is the inventor of a new splint for the treatment of fractures of the femur without confining the patient to bed.

THE Tri-State medical society of Alabama, Georgia and Tennessee, will hold its next annual meeting at Chattanooga, beginning Tuesday, October 17.

MINNEAPOLIS is to have a new brick hospital. It will be erected by the trustees of Saint Barnabas' hospital, at a contemplated cost of about $25,000.

DR. DUNCAN MCLEOD has been appointed health officer of the city of Detroit for a period of three years at a salary of five thousand dollars per annum.

THE section on materia medica and pharmacology of the pan-American medical congress propose the compilation of a Pan-American pharmacopeia.

DR. H. F. LYSTER, of Detroit, has returned from a protracted sojourn in Europe, and has opened offices in the Shurly building, 32 Adams avenue, west.

DR. C. H. FOWLER, of Baltimore, Maryland, a member of the class of '89, university of Michigan, was recently married to Miss Anna Connor, of that city.

THE BATTLE CREEK SANITARIUM.—A new prospectus profusely illustrated has recently been issued, giving a descriptive account of this extensive institution.

IN Philadelphia, out of twenty thousand labors, five thousand are reported by midwives. There are nearly one hundred and thirty midwives in that city.

THE "stoechiological method" is the latest recommended for the cure of consumption. As near as can be ascertained this is treatment by hypophosphites.

"PROFESSOR" VAN ANGELBACK was recently sentenced at Des Moines, Iowa, to one year in jail and fined four hundred dollars for selling fraudulent diplomas.

THE human cadaver contains eighteen thousand dollars' worth of calcium. This computation is made by a chemist and is based on the present market value of the metal.

DR. E. W. HARVEY recently died at his home in Bancroft, Michigan. He was a graduate of the Detroit college of medicine and a surgeon of the Grand Trunk railroad.

THE New York physicians' mutual aid association now has a membership of over twelve hundred, and has announced a prepaid assessment to all members in good standing.

SAN FRANCISCO has about seven hundred physicians who are striving to eke out an existence by administering to the ailments of two hundred and fifty thousand people.

TWENTY-TWO deaths from typhoid fever occurred in Oakland, California, during July. Three hundred and fifty cases of the disease prevailed in that city during August.

DR. SAMUEL E. MUMFORD, of Princeton, Indiana, died on July 31. He was formerly president of the Indiana state medical society, and during the civil war served as a medical officer therein.

THE Colorado medical library association has recently been organized by the profession of Denver. Dr. J. T. Eskridge, president; Dr. Henry Sewall, secretary and treasurer; Dr. J. C. Dana, librarian.

THE asylums of Texas are inadequate to accommodate the insane of that state. The *Texas Health Journal* says that because of this incapacity more than one thousand lunatics are confined in the jails.

DR. JOHN H. HOLLISTER, of Chicago, who preceded Dr. J. C. Culbertson as editor of the *Journal of the American Medical Association*, has been appointed to the editorship of the *North American Practitioner*.

THERE is a project on foot in London to amalgamate the medical societies of that city, but as it has taken a month's cautious diplomacy to bring about a committee meeting the union is not likely to occur.

AT the recent anti-alcohol congress held at The Hague, some of the speakers declared for a moderate use of alcohol, defining moderation as the consumption of an ounce to an ounce and a half in the twenty-four hours.

A LAW in Germany requires that all drugs intended for internal use be henceforth put up in round bottles, and those for external use be placed in hexagonal bottles. This enactment is precautionary against poisoning.

THE Chesapeake and Ohio railroad company are erecting a hospital at Clifton Forge, Virginia, where its disabled employes will be sent for treatment. Twenty-five thousand dollars has been appropriated for this purpose.

A COMPETITION FOR NURSES.—The *Hospital* invites nurses to compete for two prizes, one of seventy-five dollars, the other of twenty-five dollars, to be given the best plan and description of a model nursery-home and training school. Particulars will be found in another part of our columns.

AMERICAN CORNMEAL.—Dr. Eugene Sell, of the German Imperial health department, has reported to the Prussian government that cornmeal is not a wholesome article of diet and is unsuited for general consumption.

THE examination of candidates for appointment to the medical corps of the United States army, to fill vacancies, will be conducted by an army medical board in session at Washington, District of Columbia, during October, 1893.

DETROIT recorded one hundred and nineteen births for the week ending September 9—sixty-one boys and fifty-eight girls. During the same period there were ninety-six deaths, forty-five of which were under five years of age.

HIGHTSTOWN, New Jersey, has recently had a serious outbreak of diphtheria. The disease was spread by a milkman, in whose employ was a lad who remained on duty in the dairy several days after he became a victim of the malady.

EASTERN health officials are urging that a hospital car be run in connection with every emigrant train, and, in the event of contagious disease making its appearance, that sick passengers be removed thereto and the car switched off and isolated.

BELGIUM now requires that foreign medical men who desire to practice in that country first submit their applications to a special committee which will decide as to whether the applicants' scientific attainments warrant conferring this privilege upon them.

As a result of the recent imbroglio in the homeopathic medical college of the university of Michigan, Dr. Obetz retains the deanship, Drs. Wood and Gatchell resign, and the project to amalgamate the departments of homeopathy and regular medicine remains in *statu quo*.

POLICE JUSTICE HAGGERTY, of Grand Rapids, holds that the jag-cure law passed by the last legislature is unconstitutional in several respects. He declines to commit under the law, believing that the county cannot be forced to pay for the gold-cure treatment of indigent persons.

THE Colorado state board of health have issued a notice to the effect that applicants for a license to practice medicine in that state are required to possess a diploma from a three-year school, the courses of which must be at least twenty weeks each and given in three separate years.

THE erection of Grace hospital will begin in New York City October 1. Besides the hospital proper there will be three supplementary buildings designated as the house of Simeon for old men; the house of Anna for old women, and the house of the Holy Child for children.

DR. GIACINTO PACCHIOTTI, professor of surgery in the university of Turin, whose death occurred recently, left a fortune estimated at two hundred thousand dollars. This money accrued from the practice of medicine, and was bequeathed to the various educational institutions of that city.

DURING the past summer the highest mortality recorded in New York, occurred in the week ending July 22. The high water-mark was one thousand two hundred and fifty-seven. In 1892 the number of deaths for the week ending July 30, reached one thousand four hundred and thirty-four.

The preparatory medical college of New York is the name of another diploma mill which has been exposed by the *New York Herald.* The faculty and treasurer were represented by Dr. W. M. Rew, of whom the newspaper reporter purchased a diploma for twenty dollars. The doctor is under arrest.

The universities of the German empire had a membership of twenty-seven thousand five hundred for the summer semester. Eight thousand five hundred and seventy-five of these were students in medicine, which is two hundred and sixty-three less than was recorded at a corresponding period last year.

Stockings are now made of paper. A specially prepared impregnated article is employed which is said to have an extraordinary effect on perspiring feet, absorbing the moisture as soon as formed, and maintaining a constant temperature in the shoes, thus rendering the feet dry and warm. The invention is of German origin.

The American medical editors' association met in the banquet hall of the Arlington hotel in Washington, District of Columbia, on the 4th instant, under the presidency of Dr. C. H. Hughes, of the *Alienist and Neurologist.* Dr. I. N. Love, of the *Medical Mirror* officiated in the capacity of toast-master, and many happy speeches were delivered.

Dr. H. S. Gardner, of Cedar Springs, Michigan, died in Grand Rapids, Monday, August 21, whither he had gone to submit to a surgical operation. He was born at Moria, Cayuga county, New York, September 13, 1840, and settled in Cedar Springs in 1871. A wife and two daughters survive him. He was a successful physician and respected citizen.

The death of Dr. Frank W. Brown, which took place in Detroit September 9, deprives the profession of a physician whose brilliant qualities of mind and heart, made him the delight of his friends. Dr. Brown, until his last sickness, had held various positions of trust and honor, and his death deprives the profession of a physician of much promise.

The Detroit academy of medicine held its annual meeting at the Wayne hotel, September 12, and elected the following officers: President, Dr. W. P. Manton; vice-president, Dr. C. W. Hitchcock; secretary, Dr. A. H. Bigg, and treasurer, Dr. W. R. Chittick. After business had been disposed of the members sat down to a banquet as guests of Dr. W. J. Wilson, the retiring president.

There occurred two thousand nine hundred and twenty-four deaths in Chicago during July, of this year, one thousand seven hundred and seventy-five of this number being under five years of age. For the week ending August 5, there were six hundred and forty-six deaths recorded; week ending August 12, seven hundred and fifty-two; week ending August 19, five hundred and sixty-three.

Dr. Newton D. Lee, a well-known physician of Saginaw, Michigan, died in that city on the 13th instant. The deceased was born at Peru, Ohio, in 1823, and graduated from the medical college at Willoughby, Ohio. In 1850, he settled in Saginaw, where he has since practiced his profession. He was united in marriage to Miss Mary Jewett in 1853, his wife being the first white child born in Saginaw county, February 11, 1834, being the date of her birth. She and their three children survive him.

THE application of the Minneapolis, Saint Paul and Sault Sainte Marie railroad company for an injunction to restrain the state board of health from enforcing its regulations regarding the inspection and disinfection of immigrants at the Michigan border has been denied by the United States court. This decision establishes the right of the states to enforce regulations in addition to those of the United States marine hospital service.

THE next meeting of the Pan-American medical congress will be held in the City of Mexico. The date will be determined by the international executive committee which comprises one member from each of the Pan-American countries. It is probable that the congress will convene five years hence, and that the winter season will be selected for the occasion. Professor Rafael LaVista, of the university of Mexico, has been elected president.

THE American electro-therapeutic association held its third annnal meeting in Chicago, beginning on the 12th instant. Many important papers were read and discussed. Dr. W. J. Herdman, of the university of Michigan, was elected president for the ensuing year. Other members elected to official positions are: First vice-president, Dr. Franklin H. Martin, of Chicago; treasurer, Dr. R. J. Nunn, of Savannah; permanent secretary, Dr. Margaret A. Cleaves, of New York.

MEDICAL JOURNAL PUBLISHERS' ASSOCIATION.—This is the name of a society established at Washington, District of Columbia, on September 7. The following officers were elected: President, Dr. L. B. Edwards, of Richmond; vice-president, Dr. J. C. Culbertson, of Cincinnati; secretary, Dr. F. King, of New York; treasurer, Dr. J. MacDonald, of New York. An executive committee of five were also chosen. The next meeting will be held in Cincinnati on the first Monday in December, when the reading-notice bugbear, advertising agent, et cetera will be discussed.

DR. COLLINS H. JOHNSTON, of Grand Rapids, Michigan, accompanied by his wife and two children, sailed for Europe in the steamer "Friedland" of the Red Star line, on Wednesday, the 13th instant. It is the Doctor's intention to remain abroad for about one year, during which time he will devote his attention to the study of gynecology, obstetrics and pediatry at the various clinical centers of the old world. He will spend about four months in Berlin, and then proceed to Leipzic, Dresden, Vienna, Prague, Paris and London. During the Doctor's absence the readers of The Physician and Surgeon will be favored with a series of interesting letters from his facile pen.

THE British medical association has inaugurated a determined fight against the abuse of medical charities in Great Britain, and as a means to that end its committee recommends (1) that a wage-limit be established above which income persons applying for treatment will be required to pay fees; and (2) that the hospitals and dispensaries hereafter have displayed in a conspicuous place within their precincts a placard bearing the following inscription: "This institution being established to relieve only those persons who are too poor to pay for suitable medical and surgical aid, notice is hereby given that on and after this date patients will be required to give information as to their means and circumstances, with a view to prevent the abuse of this charity by persons who are well able to pay."

DETROIT is to have a new building for the offices of the board of health. The committee on public buildings recommended that the structure be two stories high and fifty by seventy feet in dimensions. It is to cost nine thousand dollars, which is to be taken from the insurance obtained from the burning of the old pest-house on Crawford street. The new building is to face Antoine street, and will be located just north of the grocery store at the corner of Clinton and Antoine streets.

THE Physicians' Protective association is the title of a society recently established in Detroit. It contemplates the collection of fees for professional services. At a late meeting held at the Russell house the following officers were elected: President, Dr. J. J. Mulheron; vice-president, Dr. L. J. Lennox; secretary, Dr. P. M. Hickey; treasurer, Dr. S. H. Knight. The board of directors are: Drs. A. N. Collins, L. J. Lennox, R. C. Olin, Hal C. Wyman, J. L. Irwin, G. G. Carson, D. Kerr and R. H. Stevens. The president delivered a short speech defining the position of the organization, the following being an abstract thereof: "Protection to the collective as well as to the individual interests of the medical profession is contemplated in this organization. The traditional conception of the physician is no longer conducive to his material welfare. It does not pay to depend on honoraria for our services. Some have objected to the formation of this association on the ground that it smacks too much of a trades' union, and, of course, it would be a dreadful thing to have it go out that our ancient, honorable and learned profession had been brought down to the level of a trade. Well, we cannot help what interpretations the hypocritical or the supra-punctitious may place on our action. We are confronted by a condition rather than by a theory. We are supposed to be an educated, sober, industrious and upright body of men—possessing, indeed, all the requirements of the higher order of citizenship. These qualifications are generally conceded, and yet in spite of the fact what body of men wield so little influence in the affairs of state? Individual members of our profession have from time to time gone before our legislature thoroughly equipped with unanswerable arguments, which they have presented with much force and eloquence, in favor of legislation considered to be in the interest of the profession as a whole, but what success have these efforts ever achieved? Our Solons have always treated our representatives with good-natured tolerance."

RECENT PUBLICATIONS.

REVIEWS.

CHOLERA: ITS CAUSES, SYMPTOMS, PATHOLOGY AND TREATMENT.*

THE return of Dr. Bartholow to the literary world is an event to be hailed with delight. During an enforced idleness of several months this eminent author has spent some of his time in preparing this manual for the press. The subject of cholera is treated of in a concise and attractive form. Etiology and treatment are especially well elucidated. The author considers some progress to have been made in the treatment of this malady during the recent epidemic. The devices resorted to have, for the most part, been prompted by germicidal philosophy, and it is impossible to indicate what permanent status will be occupied by enteroclysis, intra-venous transfusion, and hypodermatoclysis. The vast importance of sanitary measures as protective and defensive expedients is very properly insisted upon.

Dr. Bartholow's volume will be found an admirable résumé of the subject, adapted to the needs of the busy practitioner.

*By Robert Bartholow, M. D., LL. D., emeritus professor of materia medica in the Jefferson medical college of Philadelphia. Lea Brothers & Company, Philadelphia.

TREATMENT OF STERILITY IN THE WOMAN.*

Dr. de Sinéty's treatise on sterility reviews the affections and causes leading to this condition. The treatment of the conditions inducing sterility is also indicated, and the book concludes with a consideration of artificial fecundation. The matter, while not strikingly new, is well arranged, and the book is an interesting one.

*By Dr. de Sinéty. Physicians' Leisure Library. Cloth, fifty cents; paper, twenty-five cents. Geo. S. Davis, Detroit.

SEXUAL WEAKNESS AND IMPOTENCE.*

The subject of sexual impotence in both male and female receives careful review at the hands of Dr. Martin. The topic is one of some interest, the condition of impotence being so frequently amenable to treatment. Dr. Martin traverses the ground carefully and suggests much of which the practitioner can make use.

*By Edward Martin, M. D. Physicians' Leisure Library. Cloth, fifty cents; paper; twenty-five cents. Geo. S. Davis, Detroit.

BACTERIAL POISONS.*

Dr. Gamaleia's name is associated with many of the most important discoveries in bacteriology, and his investigations in the action of bacterial products have been varied and far-reaching.

In the present volume the bacterial poisons are for the first time made the subject of a connected treatise. The chemical poisons produced by microbes are studied especially as regards their pathogeny. This study of necessity includes not only the phenomena following systemic poisoning, but also the phenomena of immunization.

Dr. Gamaleia's book is divided into two parts, the first dealing with the history of microbial toxicology, and the second part treats of the actual information we possess respecting the chemical nature of the microbial poisons, their production and destiny in the animal body.

The science of bacterial toxicology is one which includes the generalization of bacteriology, of biological chemistry and of general physiology, and its conclusions are at the present time of particular importance to medicine and surgery.

This little work will appeal to a large circle of interested readers.

*By N. Gamaleia, M. D. Physicians' Leisure Library. Cloth, fifty cents; paper, twenty-five cents. Geo. S. Davis, Detroit.

THE TRANSACTIONS OF THE MICHIGAN STATE MEDICAL SOCIETY.

The handsome volume of transactions issued by the state society will be received with pardonable pride by the members. The outward appearance of the volume is better than in any previous year, and the matter between the covers is of a distinctly higher standard of excellence than any ever before attained in the life of the society. The secretary is to be congratulated upon so successful an outcome of his labors.

MEDICAL PROGRESS.

MEDICINE.

THE PATHOLOGY OF NERVOUS DISEASE.

In a paper published in a recent issue of the *Boston Medical and Surgical Journal*, Dr. Charles L. Dana takes up the question of modern pathology in its bearing on the pathology of nervous disease, adding some therapeutical deductions in regard to the use of organic extracts. The author, who styles himself an amateur in general pathology, suggests that the present is rather too exclusively the day of the clinician and of the anatomist, and that it would be an improvement to try to learn, if possible, the actual and primary causes of nervous disease. No reason can be given why muscular atrophies should be progressive, or shaking palsies should forever shake. Perhaps they always will; yet there is no reason to suppose it, and every patient should furnish a field of earnest effort until the mystery of the disease is solved.

Leaving out tumors, mechanical injuries, and rupture or stoppage of blood-vessels, organic nervous diseases may all be classed as inflammatory or degenerative. Inflammation is best described teleologically; it is the reaction of the system to a poison or irritant. The irritant is a toxine, and in most cases the product of a microbe. The part of the system which reacts to the irritant is derived from the mesoblast; in other words, it is connective tissue and blood-vessels. Animals without a mesoblast do not have inflammation. When the irritant consists only of dead cells, as occurs after aseptic injury, there is a reparative process; but in the other forms the irritation is of a microbic, or perhaps sometimes of a diathetic, origin. It acts especially upon the blood-vessels, connective tissue, and lymphatics, and it calls into play the defensive cells (phagocytes) and defensive proteids (socin and phylloxin) of the body. There is always present a something which may be called positive chemotaxis, and which sets the organism into active warfare against the invader. It is not of so much importance what the exact cellular changes are; the point is that there can be no inflammation without a cause, and that this cause is a poison of microbic origin usually, and of chemotaxic power. Different microbes call out the defensive powers of mesoblastic cells and defensive proteids in different degrees. The parenchymatous cell, or in this case the nerve-cell, has no defensive powers of its own, and has to rely on the mesoblast—perhaps in some instances upon the epiblastic neuroglia—for its protection. Besides inflammation, there are certain changes in the nervous system which are called primary degenerations, such as locomotor ataxia and the progressive spinal myopathies, in which the nerve-cell dies first, as though starved or under the influence of a narcotic poison. The cells die, and as they cannot die without a cause, one must conclude that here, too, there is a toxemia.

The relation of syphilis to tabes suggests that this cause is sometimes of microbic origin. The toxine in degeneration, however, does not cause vascular or connective-tissue irritation. There is repulsion, a negative chemotaxis, and death.

The writer suggests that the matter may be put succinctly in this way: There is in inflammation a positive chemotaxis, and in degeneration a negative chemotaxis, both conditions being due to some toxic principle of extrinsic or intrinsic origin. And he then proceeds to apply these views—which are in the main established doctrines in general pathology—to special classes of nervous diseases. Alcoholic meningitis, so called, he finds to present post-mortem no signs of inflammation, but only signs of congestion, anemia, and edema, not sufficient to account for all the symptoms. It is, in reality, a condition of brain-poisoning. Post-mortem evidences of tubercular meningitis in children frequently consist only of intensely red meninges and a few tubercles, though during life marked tubercular symptoms may have existed. Death here is not due to an inflammation, but to an overwhelming poison, or toxemia. Dr. Dana denies that acute primary myelitis ever occurs except from septic infection. This view is supported by Oppenheim, of Berlin, who has hardly found a case; Leyden takes the opposite position. How, we are asked, can there be an acute primary myelitis, except from sepsis or tubercular or syphilitic foci? Acute exudative and destructive inflammation elsewhere does not pick out a section of the organ it invades. It is easier to suppose that in most cases of so-called acute myelitis, there is first a ruptured vessel, or an obliteration through spasm or thrombosis, and that the injured part simply undergoes repair; or, as sometimes happens, becomes secondarily infected or inflamed. Chronic transverse myelitis is generally admitted to be rarely, if ever, a primary affection. Most cases are the sequelæ of an acute process, of syphilitic disease, or of traumatism. By rigid and more appropriate use of the word inflammation, present phlogistic conceptions of nervous disease become modified and replaced by the words toxemia, necrosis, and degeneration. There are certain chronic neuroses, of which paralysis agitans is one, in which post-mortems show that there has been for a long time a continual irritation of the connective tissue and blood-vessels, with secondary cellular disturbances. Such conditions answer to the definition of a chronic inflammation. Assuming paralysis agitans to be of the nature of a chronic inflammatory irritation, one must infer that there is a cause for it, and that this cause is toxic, and further that paralysis agitans is a chronic toxic disorder.

In ordinary Sydenham chorea, the consensus of opinion attributes its nature to disturbances of the same character; the evidence shows that the original trouble is humoral or microbic in origin, and that the anatomical changes partake of a subinflammatory character. The theory that epilepsy is a toxic disease, propounded by the late Dr. Austin Flint, is, no doubt, in part the true one. A toxine resulting from some defective metabolism or glandular activity, may be the active factor in producing neuroglia-sclerosis, and convulsions. The degenerative state existing in most cases of idiopathic epilepsy, may find its expression quite as much in a defective tissue change as in a purely defective condition of the nerve-cells. Idiopathic epilepsy may be best explained as a disease of the whole body, and not simply a disease of the cortex of the brain. Many nervous diseases must be regarded as of glandular or metabolic, as well as of nervous, origin. Nerve-centres defective in power of resistance to the attack of extrinsic or intrinsic agencies acting injuriously upon the system, yield readily to the power of an intoxicant. Weakening effects, as powerful emotion, lessen the resistant powers of the entire organism. They render especially susceptible those particular parts that received inadequate endowment in the beginning. In this way may be explained how fright will set up a paralysis agitans, or a neurasthenia, or an exophthalmic goitre. The point to bear in mind is the importance of regarding many of the nervous diseases, not as scleroses, or degenerations, or inflammations, or congestions, but as the result of some ulterior factor, and that it is which one desires most actively to attack. How to do it is as yet uncertain; the author of the paper suggests the application of new methods of dealing with infectious diseases—the use of the ferments, immunizing serum, extracts of normal tissues and organs, and anti-toxines, from whatever source they can be obtained.—*Medical Record.*

SURGERY.

THE EXTIRPATION OF BRAIN TUMORS.

v. **Bramann** contributes a very interesting article on this subject in the *Archiv für klinische Chirurgie*, 1893, Band XLV, Heft 2. Two cases are reported. The first patient was a peasant, aged forty-six years. A year and a half previously to applying at the hospital he had received a blow on the head. He complained of headache; the left side of the face and left arm were paralyzed, and there was marked weakness of the muscles of the left leg. The reflexes of the affected side were exaggerated, and ankle clonus was present. Hearing and vision were impaired on the affected side. At this time the fundus of the eye appeared normal, although later choked disk of a light degree developed. The patient had frequent attacks of clonic spasms, beginning in the flexors of the left hand and ascending until the arm, shoulder, and left side of the face were involved. Consciousness was preserved during these attacks. During the spasm there was conjugate deviation of the eyes to the left.

The localized paralysis and spasms were thought to be due to a tumor of the brain, which was probably a large one, involving the posterior (movement of fingers) as well as the anterior central convolutions.

The convulsions gradually became more frequent, the pains in the head increased. On one occasion the patient had a syncopal attack, with nausea, vomiting, and slowing of the pulse. Operation was finally decided upon and performed after Wagner's method of temporary osteoplastic resection. The soft parts having been turned up as a tongue-shaped flap, the bone was chiselled through in the line of the incision in the soft parts, and its base broken by means of aspatories pushed along under the surface, and the flap laid back. After removal of the thickened dura, a cystic, fluctuating mass, feebly pulsating, was discovered. It was apparently distinct from the adjacent brain-substance, nevertheless a portion of the cerebral matter was removed, as well as the growth. A drainage-tube was wrapped in iodoform gauze and inserted into the cavity, and an antiseptic dressing applied.

Although the wound healed satisfactorily, the patient was not benefited by the operation, and within two weeks convulsions similar to those before described returned. The drainage-track became surrounded by unhealthy granulation, and the part became prominent. The tumor was found to be a myxo-sarcoma, and the return of the convulsions was ascribed to a recurrence of the growth. A second operation was no more successful than the first. Finally, a third attempt was made to relieve the patient; this time a considerable portion of brain-substance surrounding the growth was removed. The cavity was four to six centimetres deep and as large round as a saucer. The result was eminently satisfactory. Two months after the last operation the patient was able to leave the bed, the choked disk had disappeared, power had returned in the paralyzed leg, the hand and forearm alone having failed to improve. A month later there were no signs of return of disease. Sarcomata of the brain seem less prone to give metastasis than when these tumors are found in other portions of the body.

A second case was that of an artist who had received a blow on the right side of the head a year before coming to the hospital. At this time he had choked disks, most marked on the right side; diminution of the field of vision, particularly of the right; left-sided facial paralysis; paresis of left arm, and to a less extent of the left leg; also slight loss of power in the right leg. The reflexes were increased on both sides, but were most marked on the left. After being under observation for a week an edematous swelling appeared on the right side of the head. A few days later the patient had a convulsion affecting the left side of the face and the left arm and leg. The diagnosis lay between abscess and tumor. The choked disks, the absence of symptoms of meningeal irritation, of vomiting, of hebetude, of fever, and of anorexia favered the latter condition.

An operation was performed, when a neoplasm of the brain was removed, which weighed two hundred and eighty grammes. A large part of the longitudinal fissure, and even the cribriform plate of the ethmoid bone, were exposed after the removal of the tumor. In order to equalize the intra-cranial pressure and prevent edema of the brain, the cavity was firmly packed with sterilized iodoform gauze. Convalescence was tedious, but recovery finally took place. The choked disks disappeared, but the power in the limbs was only partially regained. The tumor proved to be a mixed spindle- and round-celled sarcoma,

The author devotes considerable space to a discussion of papillitis. This condition is almost invariably present in cerebellar tumors. Neoplasms in the frontal, parietal, and temporal regions cause a milder grade of the same condition. These variations are explained on anatomical grounds. The venous blood of the fundus is carried by the posterior and short ciliary veins directly into the cavernous sinus, or into the superior ophthalmic veins. The latter empty principally into the cavernous sinus; a portion of the blood, however, is delivered into the anterior facial vein. Any interference with the return circulation, either by pressure upon the vein accompanying the optic nerve or on the sinus itself, will give rise to a venous hyperemia of the disk.

The sinus is so well protected in its membranous envelope that a great increase in the intra-cranial pressure, or a force acting almost perpendicularly from above downward, as a tumor of the base, is necessary to cause sufficient pressure to give rise to symptoms. An increase of pressure is noted much earlier, however, by the veins accompanying the optic nerve, which lack the complete protection of the dura, and, moreover, rest directly on the base of the skull. Hence, the choked disk in tumors of the cerebrum, especially in those situated near the convexity, is due primarily to compression of these veins; secondarily, to compression of the sinus. The stasis produced by even a remote tumor is naturally more intense the nearer the base of the brain the new growth is situated, and reaches its highest degree when a direct compression of the veins at their point of entrance into the sinus exists. Tumors in the median line, or very large growths, produce bilateral choked disk. In such cases the localization of the growth is very difficult, as the same condition is produced by cerebellar tumors. According to the author, an important point in the differential diagnosis is the presence of hemorrhage and ecchymoses in the retina and choroid. These are only met with in tumors near the base of the frontal lobe, and are never seen in cerebellar growths, no matter how advanced.

The author also offers an explanation of the choked disk occurring in tumors of the cerebellum, and in other affections of the posterior fossa of the skull. The blood from the orbit and bulb flows into the cavernous sinus, thence into the superior and inferior petrosal sinuses. The first, running along a groove in the petrous portion of the temporal bone, empties into the lateral sinus at a point where the latter emerges from the tentorium. The second flows backward toward the jugular forearm; a third, but inconstant channel, the basilar plexus of Virchow, carries the blood to the anterior spinal plexus. The inferior petrosal and the basilar plexuses lie in shallow bony grooves, and hence are easily compressible. The lateral sinus in that part of its extent occupying the sigmoid fossa of the temporal bone, is less resistant than the portion in the tentorium, which membrane separates more or less completely the posterior from the middle and anterior fossa of the skull. A tumor or an abscess developing beneath the tentorium, even if small, will produce a more marked increase of pressure than similar affections of the hemisphere. This rise of pressure extends to the brain and its membrane, to the lateral sinus, as well as the other two feebly protected channels. The first result is a stasis in the cavernous sinus, which soon leads to stagnation in the fundus. Tumors of the occipital lobes, by downward pressure on the tentorium, also produce choked disk—as in nearly all cases of tumors of the hemispheres, more marked on one side. Affections of the temporal lobes are very variable in respect to the production of choked disk, and it has been generally supposed that this condition is very rare. Excluding the common disease of this region—namely, abscess following middle-ear disease—we will find that choked disk is by no means rare, but is not as marked as would be expected from the proximity to the cavernous sinus. The explanation of this condition is found in the fact that the cavernous sinus is exceedingly well protected against lateral pressure both by the enclosing dura and more efficiently by the processes of the tentorium attached to the anterior and posterior clinoidal prominences. The more anterior a tumor of the temporal region is situated, the more marked will be the difference in the stasis in the two eyes. If the tumor is located at the base of the third frontal convolution, compressing the optic tract and its vessels, then we shall have choked disk of the corresponding eye only. It is a fact that the degree of the choked disk does not depend so much upon the size of the tumor as upon its structure and mode of growth. Circumscribed tumors produce more marked symptoms than abscesses and diffused growths, which form at the expense of the brain mass.

In regard to the technique of cerebral surgery the author dwells upon the importance of checking all hemorrhage. Compression with sterile gauze during the operation, and with an iodoform tampon afterward, is of the utmost importance in preventing edema. Large cavities should not be packed with iodoform gauze exclusively, as there is danger of intoxication. Opening of the skull simply to relieve pressure is condemned by the author.—*American Journal of the Medical Sciences.*

THE TREATMENT OF TUBERCULOUS JOINTS WITH IODOFORM OIL.

THE *Centralblatt für Chirurgie*, 1893, Number III, reviews the monograph of De Vos on this subject. The work embraces the results obtained at the clinic and polyclinic at Leyden, covering a period of a year and a half. The iodoform was prepared in the following manner: Ten grammes of the powder were placed in a black glass bottle and covered with a solution of corrosive sublimate 1:1000, which was allowed to remain four days; the fluid was then decanted and the iodoform washed repeatedly with fresh distilled and boiled water; to this asceptic iodoform was added one hundred grammes of olive oil which had been previously boiled ten minutes and cooled down to 30° centigrade, and repeatedly shaken.

For injections into the hip-joint the author recommends that the needle should be fourteen centimetres long; when the injection is made into bone the needle is provided with a stylet. After experimenting on cadavers the author recommends the following methods for injecting the different joints. For the shoulder-joint: adduction of the arm, with the forearm bent at a right angle across the body; the needle is entered one centimetre behind and below the point of the acromion. For the elbow: a point is selected external to the olecramon, the needle being entered between the head and tuberosity of the radius. The wrist: the point of election is, on the radial side, the most dorsal corner of the tabatiére; on the ulnar side, a place on the upper anterior course of the pisiform bone. For the hip, the author's method is as follows: the mid-point between the anterior superior spine of the ilium and the tuberosity of the pubes is designated; from a point the breadth of the patient's thumb external to this a line is drawn downward to the external point of the trochanter major; this last line is divided into four equal parts; the first dividing-point from the trochanter is the point at which the needle is to be entered. It is necessary that the limb should be straight and the inner border of the foot should be vertical. If the position of the trochanter is out of the Roser-Nélation line the needle must be carried a corresponding distance in the same direction. For the knee: at the point between the upper end of the tibia and the ligamentum patellæ. For the ankle: on the outside of the foot closely anterior to the point of the malleolus in a direction toward the calcaneum.

It is recommended to make the injections slowly, occupying about ten minutes for the introduction of ten grammes. For adults, one gramme of iodoform may be used with safety. If no reaction appears, the second injection is to be made in eight days. The intervals may gradually be made longer.

Massage and passive movements are not to be used after the injections, as this might produce iodoform intoxication or disseminate the tubercular infection. Moderate active movements are recommended. Some of the symptoms of iodoform intoxication are dimness of vision, retinal hemorrhages, and a papular retinitis. The author considers iodoform oil better than the glycerin mixture for theoretical reasons. Of the cases reported, the duration of treatment varied between nine and three hundred and twenty-five days; the number of injections from one to twenty; the amount of iodoform used in a case from two to sixty-seven and one-half grammes; the amount of oil used from ten to three hundred and eighty-five grammes. Result, seventy-two per centum entirely cured. Of the sixty-eight cases, sixty were clearly joint tuberculosis. Only two cases of recurrence were observed.—*American Journal of the Medical Sciences.*

THERAPEUTICS.

THE ACTION OF BICHLORIDE OF MERCURY ON THE BLOOD-CORPUSCLES.

THE action of the bichloride of mercury upon the corpuscular elements of the blood has been the subject of an elaborate study by E. Maurel (*Bull. Génér. de Thérapeutique,* March 15, 1893). The author has examined the question from toxicological, therapeutic, and pathological points of view. In the *first* instance he finds that,—

(1) Bichloride of mercury, in high toxic amounts, exercises a noxious action on both the white and red corpuscles of the blood.

(2) The drug in small amounts affects the white cells more markedly than it does the red bodies.

(3) Finally the minimum fatal quantities for the organism correspond to the smallest amounts necessary to destroy leucocytes; the same relation exists in regard to the largest quantities tolerated by the economy and those which are borne by the leucocytes; and it can be said therefore, that at present there is no histological element so susceptible to the influence of the drug in question as human leucocytes.

The results of previous studies lead the author to believe that the action of corrosive sublimate plays a less important *rôle* in poisoning by this agent.

Therapeutically, the observer has studied the action of mercuric chloride as an *alterative* and as an *antiseptic.* As an alterative, (*a*) the drug, even in therapeutic amounts, exercises a certain action on the white blood-corpuscles. (*b*) When the substance is given by the stomach, this action manifests itself upon the leucocytes alone; but, on the contrary, when administered hypodermically and in the usual doses, the drug acts on both the white and the red corpuscles. These effects, in either case, may be explained largely by the alterative action of the agent. As an antiseptic, (*c*) the use of the bichloride of mercury, as such, is justified by its effects on certain pathogenic microbes. (*d*) This antiseptic action varies according to the nature of the germs; the mercuric salt is efficacious against *staphylococcus albus* only in the strength of one to five thousand, while in the bacteria of carbuncle it acts well in the solutions of the strength of one in eighty thousand. (*e*) Administered internally, the susceptibility of the white cells must be taken in consideration, and in such instances the drug should be employed against microbes that are more easily affected than human leucocytes. These latter in man begin to be acted upon by solutions of the strength of one in sixty thousand, the effects being quite pronounced under the action of solutions of the strength of one in forty thousand. In man the microbicidal proporties of the bichloride of mercury, given internally, are to be utilized only when the pathogenic germs can be acted upon by weaker solutions than the ones just indicated. (*f*) It is probable that the leucocytes of different animals are differently acted upon by the drug. In order to employ the agent as an antiseptic in a certain species of animal, it must be ascertained first the degree of susceptibility of its leucocytes. (*g*) It must be borne in mind that to act as an antiseptic it is not necessary that the dose of the drug employed be able to kill the microbe; it is sufficient that such a dose enable the leucocytes to triumph over the germs in question. Often the same amount of mercuric salt diminishes the power of both kinds of bodies; but it is important that the action exercised be such as to enable the leucocytes to conquer, as it were, the microbes. In the majority of cases antiseptics, internally administered, act only as adjuvants. (*h*) When hypodermic injections are used the cells coming in direct contact with the solution are destroyed; but this action is merely local, and the organism is soon able to repair the loss. (*i*) The external use of the drug is attended with less danger, since the blood-cells are not acted upon until after the mercuric agent has been mixed up with liquids of other tissues.

Pathologically, the action of the bichloride of mercury upon the corpuscular elements explains: (*a*) The depressant effects of the medicament upon the economy, effects which are followed by a condition of general anemia. (*b*) In some cases the drug acts more powerfully upon the leucocytes than upon certain microbes, the reverse taking place, as has been shown, in other instances. The appearance of mercurial stomatitis can thus be explained. Again, in a third class of instances, the phenomenon may be explained by the fact that certain germs remain inactive while the corpuscular elements of the blood retain their normal powers; but as soon as such powers begin to fail, under this or deleterious influence, then the latest germs are apt to become virulent.

Such in general, are the conclusions drawn by the author from his remarkable study, and the results as a whole may be embodied in the statement: *The leucocytes play an important part regarding the action of the bichloride of mercury, first as a toxic agent, second as an antiseptic, and third as an alterative.—Therapeutic Gazette.*

THE HYPODERMIC INJECTIONS OF PHOSPHATE OF SODIUM.

In reviewing the literature of the subject Ed. Égasse (*Bull. Génér. de Thérapeutique*, March 30, 1893) calls attention to the recent researches of Crocq, *fils*, who draws the following conclusions: (1) The subcutaneous injections of a two per cent. solution of sodium phosphate in laurel-water produce no local or general deleterious reaction. (2) With a daily injection at the start, and afterwards an injection every other day, of one cubic centimetre at first and then of three cubic centimetres of the solution referred to, a powerful influence is exercised in patients suffering from nervous disorders. (3) This measure produces a purely tonic action on the nervous system, and the results are either curative or palliative,—curative, in diseases *not* dependent on a functional disturbance of the cerebro-spinal axis; palliative, when there exist lesions of the nerve-centres. (4) The superiority of this method lies chiefly in the simplicity of its employment.

Van Bever and De Smedt, however, as the result of a fair trial of the method, have not been able to corroborate Crocq's conclusions. These authors treated fifteen patients,—four hysterical women, four neurasthenic men, two females with rebellious trigeminal neuralgia of the left side, one case of chloranemia, two of paralysis agitans, and two of tabes. In all, they administered four hundred injections. In twelve of the cases the results were negative. In two of the neurasthenic men amelioration was noticed during the first fifteen days, and only a female suffering from trigeminal neuralgia is said to have been completely cured.

Following the suggestions of Peter, Chéron has employed injections of phosphate of sodium to increase vascular tension, using the following solution:

℞	Pure phenic acid, ...	1 gramme.
	Chloride of sodium, ...	2 grammes.
	Phosphate of sodium, . . .	8 grammes.
	Distilled water, ...	100 grammes.

The injections were made with aseptic instruments, and varied from five to one hundred grammes, introduced in the trochanteric region. Under the influence of these injections there was noticed a diminution of pain in certain diseases, such as pyosalpingitis, and they also enhanced the reabsorption of pelvic exudates. An injection of this artificial serum, in doses of five, ten and twenty grammes at a time, produced an elevation of the arterial tension. In cases of pelvic peritonitis, acute or chronic, an injection of from five to ten grammes of the liquid caused an increase of two to three centimetres, which persisted for fully twenty-four hours. Chéron, therefore, recommends at the beginning of the treatment, injections of five to ten grammes, repeated several times a day in the acute cases, and once every day, every other day, or every three days in the chronic cases. If said amount does not modify the arterial pressure, it must be increased to twenty, forty and sixty grammes in order to obtain permanent results. This hyper-tension, kept up for several weeks, gives rise to a rapid reabsorption of the exudates, followed by a notable amelioration of the digestive functions. Chéron concludes, then, that the hypodermic injections of this artificial serum constitute an exceedingly important therapeutic measure in the medical treatment of pelvic inflammations of the female. They improve the general condition of the patient, and possess a marked resolvent power on all pelvic exudates.—*Gazette.*

MEDICAL JURISPRUDENCE.

LEGAL RESPONSIBILITY OF THE PHYSICIAN FOR COMMUNICATING A CONTAGIOUS DISEASE TO HIS PATIENT.

THE mission of the physician is to cure, not to communicate disease. And it is his duty while attending patients suffering with infectious diseases, as smallpox, diphtheria, and the like, when called upon to attend other patients not so afflicted, to take such precautionary measures as experience has proved to be necessary to prevent the communication of such disease to his patients.

A physician knowing that he has an infectious disease, or that he has been exposed to such, and who continues to visit his patients without informing them of that fact, and without proper precautions on his own part, and thus communicates the disease to one of them, is guilty of a breach of duty and of his implied contract with his patient, which, whether it be regarded in the light of carelessness, or negligence, or fraud, renders him liable for the consequent damage, including as well as the suffering, danger, and loss of time, the expense necessarily occasioned by the second disease thus produced by his own wrongful act.

The rule of law which defines the duty of a medical practitioner to his patient requires, *first*, that he bring to his task reasonable and competent medical knowledge; *second*, that he apply that knowledge in the particular case with reasonable care, diligence and skill; *third*, that in cases of doubtful practice, that is where two or more courses of treatment are approved and followed by competent physicians, he use his best judgment as to which treatment is best adapted to the case in hand. The same rule also requires, *fourth*, that this judgment be an enlightened one; that it be based upon and have a due regard for the advanced state of medical knowledge at the time such treatment is administered. It is to this last requirement that attention is directed, as tending chiefly to ascertain the nature and extent of the physician's responsibility in the case suggested by the title of the present paper.

It is the legal duty of the physician to keep himself abreast of the medical knowledge of his time. Medicine is progressive. Medical theories accepted today are discarded tomorrow. The practice to which such theories give rise falls into disuse, as does also the practitioner who clings with mistaken tenacity to a treatment for which the sciences auxiliary to medicine have provided a better substitute. Bare mention of calomel or the lancet is almost invariably met with a smile of derision, scarcely perceptible, perhaps, but how expressive! Twenty years ago craniotomy in pelvic deformity was the rule. Today an eminent authority affirms with the emphasis of a clinched fist that no degree of maternal malformation is an excuse for taking the life of the child; and adds that the obstetrician who, failing in instrumental delivery, neglects as a last resort to avail himself of the Caesarean section, rendered so comparatively safe by the marvellous results of antisepsis, is, as he should be, guilty of malpractice, at the very least, and liable to prosecution therefor. "A single drop of pus," says an eminent surgeon, "is evidence of the operator's negligence." These are some of the present signs in the medical sky, and serve to point out to the isolated practitioner the course to be taken by the army of medical progress.

These signs may not be unheeded with impunity. The law is alert to exact for the patient that treatment which the present approved resources of medical and surgical skill make reasonably possible. It may, for example, at no distant day, become a question for judicial determination whether the failure or refusal of the surgeon to observe antiseptic precautions will not render him liable to an action for malpractice. And so, too, in the light of recent investigations into the causation of contagion, the infection of a patient by his medical attendant may be such conclusive evidence, either of the lack of requisite medical knowledge or of negligence on the part of the latter, as will render him liable in damages therefor. That is to say, the mere fact of the communication of such contagion will be proof that the physician has not observed all those precautionary measures that the experience of the time has shown to be necessary.

What precautions or treatment are reasonable or necessary is a question not of law, but of fact, to be determined by a jury in the light of competent medical expert testimony. And the tests employed in this inquiry are the state of medical knowledge at the time and the condition of the patient and the danger that threatens him.

The terms reasonable and necessary are elastic, and expand to include the resources that the advance of medicine supplies. Medical treatment that a few years ago would have been reasonable is not now so considered. Treatment that would be reasonable for a patient suffering with a slight ailment would be negligent for a patient afflicted with a dangerous disease requiring the highest degree of care. And so of preventing the exposure of a patient to a dangerous contagion, the highest degree of care, or that which exhausts the preventive means that advanced medical knowledge has provided, would alone be termed reasonable, and such as would shield the practitioner from liability.

The facts from an adjudicated case in which the rule, stated in the second paragraph above, for the measure of damages in cases of this kind was applied, will assist to a clearer conception of the nature and extent of the duty required of the practitioner.

The action was by a physician to recover the amount of his bill for medical services to the defendant and his family. After the plaintiff, the physician, had proved his account, it appeared in evidence that on the first visit of the plaintiff to attend the defendant he was summoned while at the defendant's house to go to that of H's, a neighbor, and was then told by the wife of the defendant, who was himself very ill, that if he went to see patients sick with small-pox he must not come there, but that they would employ another physician. To this he replied, "I will not unless H. will be bound for my fees." On the next day when he visited the defendant again, he was again told by the defendant's wife that if he visited small-pox patients he could not attend the defendant, and he replied that he would not visit any small-pox patients. About ten days after he was first called in, the defendant's wife was pressing him strongly about visiting small-pox patients, and that he must not visit them, when, without admitting or denying that he visited them, he said that he would change his clothing and there would then be no danger. It was further proved that after the plaintiff had been attending the defendant for about three weeks for fever, and when he was getting better and began to recover from the fever, he broke out with small-pox, and some time after this his son also broke out with small-pox. The defendant then proved by witnesses that while the plaintiff was attending him for typhoid fever he was also attending small-pox patients at H's, and also proved other facts tending to show that the plaintiff, by his visits to the defendant, had brought with him and communicated to the defendant the small-pox infection, and that there was no other means by which it could have been communicated to him.

"Upon these facts," says the supreme court, "it cannot be doubted that the plaintiff was *prima facie* liable to action. Even if there had been no warning to him by the defendant's wife, it was his duty, in passing from his patients who were afflicted with an infectious and dangerous disease to others who were not so affected, to take such precautions as experiences may have shown to be necessary to prevent the communication of the infection by his own acts. But when in the very commencement of the services for which a considerable portion of the charges now in question were made, he was expressly warned by the defendant's wife, acting presumably for her husband as well as for herself and the rest of the family, that if he attended small-pox patients he must not come there, but they would employ another physician, his promises of compliance, constituting as they did the inducement and condition of his further employment, entered into and formed part of the consideration of the contract on which he sues. And whether they be regarded as being in the nature of a warranty that the family should not be subjected to the risk of small-pox by his visits, or as having been intended to lull their apprehensions and thus to procure a continuance of his employment by a delusive statement, their violation and the consequent damage constitute in our opinion an available ground for reducing the recovery for the services in the performance of which the violation of these promises and the consequent damage occurred. After the conversation which occurred during the first and second visits of the plaintiff, the defendant and his family had a right to believe that the plaintiff was not visiting small-pox patients, inasmuch as he had in effect promised that he would not visit the defendant while he was attending such patients, or that he would not attend such patients while he was visiting the defendant."

And, accordingly, the physician was not allowed to recover the amount claimed for services in curing the patient of the small-pox communicated to him through such physician's own negligence.

The same rule of law that prescribes the degree of care the physician must observe to prevent the communication of a contagious disease to a patient applies also to hospitals; and whatever is here said of the duty of the physician applies equally to them.—*International Medical Magazine.*

PATHOLOGY.

IMMUNITY.

NOTHING at present engaging the attention of pathologists seems destined to attract such universal attention or to be of such far-reaching benefit to practical medicine as the study of the problems connected with immunity and recovery from infectious disease. It would seem that at last, nearly a century after the first vaccination (May 14, 1796), the obscurity which has prevented any rational explanation of its protective action were to be penetrated, and that the near future might witness the application of similar preventive measures to many of the infectious diseases. Already suggestions for the treatment of some of these diseases, gathered from ascertained facts regarding immunity, have been followed, and in a number of cases with the most gratifying results. In view of these facts, it has seemed appropriate to present to the readers of the *Journal*, in a short résumé, some of the principal contributions upon which the prevailing theory of immunity is based.

This theory may be briefly stated as follows: It has long been known that much, perhaps the whole, of the pathogenic influence of bacteria is due to the action of poisonous substances produced by them in the process of their growth. These "toxins," as they have been called, are accountable for the fever, the prostration, and other general symptoms of the infectious diseases, as well as for the anatomical changes (lesions) in the immediate neighborhood of the growing germs. So long as they continue to be produced and to have unrestrained action the disease progresses. But hand-in-hand with the production of these poisonous substances there are produced (by the cells of the body, presumably) certain antagonistic substances which neutralize the toxic principles, and thus prevent their poisonous effect upon the body. These antagonistic principles have been called "antitoxins," and the extent of their production is supposed to measure the degree of immunity. The natural immunity of some species of animals to certain diseases would appear to depend upon the ability of those animals to quickly prepare the antitoxins necessary to neutralize the poisons of the diseases from which they are immune. Artificial immunity, induced by experiment, depends upon the introduction into the body of a sufficient quantity of the specific antitoxin to neutralize the specific toxin. Recovery from the self-limited infectious diseases depends upon the production by the body of the antitoxins necessary to neutralize the specific poisons of the disease.

In 1890, Ogata and Jasuhara published in the "Transactions of the Medical Faculty of the Imperial University of Tokio, Japan" (see *Centralbl. f. Bakt. u. Parasit.*, 1891, IX, page 25), an account of some remarkable experiments performed by them with a view to determining the influence of the blood of animals naturally immune to anthrax upon the virulence of the anthrax bacillus. The frog, white rat, and dog all possess natural immunity to anthrax, and it was found that cultures of virulent anthrax bacilli when mixed with the blood of these animals, or when grown upon media containing their blood serum, lost their virulence, either not killing at all, or only several days after the death of control animals inoculated at the same time with anthrax cultures not so treated. They furthermore determined that the immunity natural to the frog could be induced in mice by the intra-peritoneal injection of a few drops of frog's or dog's serum. All the mice so treated withstood the anthrax infection when the protective injection was performed at any time between seventy-two hours before and five hours after the anthrax inoculation. They also demonstrated that of seven mice thus rendered immune, six survived an inoculation with virulent anthrax several weeks after the establishment of the immunity, showing the effect to be quite lasting. The blood of other animals not naturally immune to anthrax when similarly injected had no protective action.

In a subsequent paper (*Centralbl. f. Bakt. u. Parasit.*, 1891, IX, page 597) Ogata relates the result of his efforts to obtain the substance of the blood conferring this immunity, and describes a method of preparing from the blood a substance soluble in water and glycerin, insoluble in alcohol and ether, but not decomposed by them, decomposed by the digestive juices, by warming to 45° centigrade, and by acids, and capable of conferring immunity to anthrax. The glycerin solution of this substance was shown to preserve this power of conferring immunity for a very considerable length of time. It was believed by Ogata to be of the nature of an enzyme, having the power to convert fibrin into peptone and starch into sugar.

Shortly before the appearance of the above-mentioned paper by Ogata, Behring and Kitasato (*Deutsche medicinische Wochenschrift*, 1890, Number XLIX) published the results of some remarkable experiments demonstrating the power of the blood of animals, made artificially immune to diphtheria and tetanus, to confer that immunity to other animals and to act curatively even after the onset of symptoms of the respective diseases. Thus, a rabbit rendered artificially immune to tetanus was shown to withstand an inoculation of ten cubic centimetres of a virulent culture of the tetanus bacillus, one-twentieth of which dose was at the same time shown to be fatal to rabbits not thus rendered immune, and the blood of this immune rabbit was further shown to be capable of conferring immunity to mice, which are well known to be particularly susceptible to tetanus.

In 1887 Brieger had shown the presence in sterilized cultures of the tetanus bacillus of a substance capable of causing trismus, convulsions, and death when introduced into mice, and later (1888) this substance was obtained from the freshly amputated arm of a patient suffering from tetanus. As the bacilli do not become generally diffused throughout the body in tetanus, it became evident that the exhausting symptoms of the disease must be due to the poisonous effect of the substance above referred to. With these facts in mind and in the hope of throwing some light upon the *modus operandi* of the blood of their immune rabbit in conferring immunity to others, Behring and Kitasato exposed virulent cultures of the tetanus bacillus to the action of its blood serum for twenty-four hours, after which it was found that doses of the cultures so treated three hundred times greater than the fatal dose of the same culture before such treatment were innocuous. They were, therefore, led to conclude that the serum of an immune animal possesses a most potent neutralizing action upon the poisons of the tetanus bacillus.

Simultaneously with the publication of these experiments of Behring and Kitasato there appeared in the *Berliner klinische Wochenschrift*, 1890, Number XLIX, an article by Brieger and Fraenkel on immunity from diphtheria, in which they described the induction of immunity by the inoculation of guinea-pigs with a three weeks' old bouillon culture of Loeffler's bacillus which had been heated for one hour to a temperature of 60–70° centigrade. They found that the immunity was not immediately produced, but was gradually developed, until, two weeks after such an inoculation, it became complete. Even after this time slight local diphtheritic inflammation was produced by inoculation of a virulent culture, but none of the animals died. The power of attenuated virus to thus gradually induce immunity to the virulent poison of a disease had previously been shown by Pasteur as regards anthrax and hydrophobia.

ier paper (*Berliner klinische Wochenschrift*, 1890, Numbers XI and
d Fraenkel had described the specific poison of diphtheria and
an albuminous substance, a "toxalbumin," exceedingly pow-
it deprived of its poisonous properties by heating to a tem-
to 60° centigrade. Because the immunizing substance
rature than this without impairment of its activity,
the toxic and the immunizing substances to be sepa-
exact nature of the protective substance was not

described the manner in which the immunity
in the first instance, but after the publication
n article by Behring (*Deutsche medicinische*
ed at length five different methods by
case of diphtheria:
on attenuation of the virus, and was
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the diphtheria bacillus were treated
iodine, and after two inoculations with
proved immune to virulent cultures.
exudate of guinea-pigs which had died as the
Loeffler's bacillus, when injected in small quantity
made them very sick for several days, but on recovery
immune.
cases, animals which had been inoculated with virulent diph-
recovered as the result of careful treatment (particularly with
chloride); these animals were found to be immune, but it was discov-
that injections of iodine trichloride alone had no immunizing action.

(5) But treatment with small quantities of hydrogen peroxide on several successive days before inoculation produced a more or less perfect immunity. It was shown that the blood serum of animals immunized by any of these methods, though having no actual germicidal quality, was still in some way able to neutralize the poisonous effects of the products of Loeffler's bacillus, and it was further shown that treatment with this serum was quickly followed by amelioration of the symptoms, and that in this way recovery could be brought about after otherwise fatal doses of the virulent culture. The possibility of curing acute infectious diseases by treatment with the serum of immunized animals was thus suggested, and it was also suggested that the immunizing and curative principle of the blood serum acts as a chemical antidote, not as a germicide.

Working along the same lines as Behring and Kitasato, Tizzoni and Cattani (various articles in *Riforma Medica* for 1890 and 1891, reviewed in *Centralbl. f. Path. Anat.*, 1891, II, Number XVI, page 666) arrived at a similar result as far as the production of an artificial immunity was concerned, and they also demonstrated the power of the blood serum of an immunized animal to confer immunity to others. The smallness of the amount of serum necessary to the establishment of immunity suggested to them the probability that the neutralizing substance was of the nature of a ferment, in some manner disintegrating the toxins of tetanus. This theory, it will be remembered, had previously been advanced by Ogata. In a subsequent communication (*Centralbl. f. Bakt. u. Parasit.*, 1891, IX, Number XXI, page 685) they recount experiments which bear out this supposition, and they conclude that the tetanus "antitoxin," as they now call it, is an albuminous body of the nature of an enzyme, but not identical with the fibrin ferment of the blood. Still further experiments (*Centralbl. f. Bakt. u. Parasit.*, 1891, X, Numbers II and III) showed this to belong to the globulins.

While these researches regarding immunity to tetanus and diphtheria were in progress in Berlin and Bologna similar experiments were being carried on in Munich with the virus of pneumonia, and Emmerich and Fowitzky (*Münch. med. Woch.*, 1891, Number XXXII, page 554) succeeded in producing artificial immunity in rabbits by inoculation of very small quantities of virulent cultures of the pneumococcus, the dose each day being increased until the immunity was complete. They found the serum of such immune animals to be capable of curing rabbits and mice suffering from pneumo-septicemia, if introduced soon after the onset of symptoms. No therapeutic experiments upon patients suffering from pneumonia were undertaken.

A similar immunity to pneumonia was obtained by the brothers G. and F. Klemperer (*Berliner klinische Wochenschrift*, 1891, Numbers XXXIV and XXXV) by the injection of sputum of convalescents from pneumonia, of pus from empyema complicating pneumonia, of cultures of the pneumococcus attenuated by heat, and of a glycerin extract of an agar culture. It was later shown that the blood serum of convalescents from pneumonia was also capable of conferring immunity to rabbits. The immunity produced by all these methods appeared to be identical. In general it was found to be developed in three or four days when the protective substance was injected into the veins, but only after two weeks when introduced subcutaneously. The duration of the immunity varied in different cases, but was in some as long as six months.

The protective substance was found to be incapable of curing animals suffering from pneumo-septicemia, but, on the other hand, a distinctly beneficial effect was noted after injections of the serum of immune animals, the result of such injections being uniformly beneficial in twenty-four rabbits suffering from pronounced symptoms.

In searching for an explanation of these results, the Klemperers separated from cultures of the pneumococcus a toxalbumin, poisonous in large doses, but capable in small doses of conferring immunity in animals. This had, however, no germicidal action, nor healing quality, and they were led to believe the immunity produced in their experiments to be due to the development in the body, through the agency in some way of this toxalbumin, of an antagonistic substance capable of preventing the development of the disease. This substance they have called "anti-pneumotoxin." They believe the potency of the serum of immune animals to convey immunity and to act curatively on other animals affected with pneumo-septicemia to depend upon its content of anti-pneumotoxin, not upon any germicidal action of the blood serum. So convinced were they of the correctness of this view that they ventured to test the therapeutic value of the serum of their immunized animals in several cases of acute lobar pneumonia.

Having demonstrated its harmlessness by personal injections, they employed it subcutaneously in six cases of pneumonia. In all there resulted a decided reduction of temperature and a slowing of the pulse and respiration.

In two of the cases the temperature remained normal after the treatment; in the others it slowly rose again six hours or so after the injection. That they were not simply dealing with an antipyretic but with some specific was shown by the entire absence of any noticeable effect on patients affected with typhoid fever.

At about this time the theory of antitoxins was strengthened by the report of experiments by Ehrlich (*Deutsche medicinische Wochenschrift*, 1891, Numbers XXXII and XLIV) upon immunity from the poisonous effects of the two vegetable alkaloids, ricin and abrin. The immunity was produced in each case by the addition of very small quantities of the poison to the food of mice, the dose being increased from day to day, until after six days of such treatment an immunity was induced which protected the mice from doses of ricin from two hundred to eight hundred times stronger than the usual fatal dose, and from doses of abrin four hundred times the strength of the ordinary fatal dose. In both cases the immunity protected from the local inflammatory reaction as well as from the general symptoms (diarrhea, collapse). In seeking an explanation of this remarkable immunity, Ehrlich separated from the blood of his immune animals in each case a substance capable of completely neutralizing the action of the alkaloid. These he has designated by the terms "antiricin" and "antiabrin."

Injections of the blood of immune animals established an immunity varying in degree with the degree of immunity of the animal from which the blood was taken and according to the amount injected; in other words, according to the amount of antiricin or antiabrin introduced; but the degree of immunity so produced was never comparable to that obtained by the method of feeding.

From his observations Ehrlich was led to believe that the antidote formed remained for some considerable time in the body, as the immunity produced was of some duration. Its exact duration was not determined, and susceptibility to infection subsequently ensued.

Animals immune to ricin were found to be fully susceptible to abrin, and *vice versa*, showing the antidotes in each case to be specifically antagonistic to one particular poison only and not to produce any generally efficient immunity, and Ehrlich argues therefrom that the antidotes in the two cases must be separate and distinct bodies.

These experiments of Ehrlich are strongly suggestive of a purely chemical antagonism between the antitoxins formed in the blood of immune animals and the poisons of the infectious diseases from which they are protected, the analogy being complete in every essential particular between the immunity to the alkaloids ricin and abrin and that to the infectious diseases which have been the subject of similar study.

It is not the purpose of this review to present every item of proof of the theory whose development we have been tracing, but rather to show a sufficient basis for its use as a good working hypothesis. This was believed to have been shown at the time of which we have just been speaking (1891), and soon reports of interesting therapeutic applications of the principles of the theory began to appear, more particularly in the case of tetanus. As their result furnishes an important factor in support of our theory, they will form the subject of a subsequent notice.—*American Journal of the Medical Sciences.*

MEDICAL MELANGE.

To Obscure the Taste.—Gymnemic acid is the active principal of *gymnema sylvestris*, the formula of which is $C_{32}H_{55}O_{12}$. It is a greenish-white powder, having a sharp, acid-taste; very soluble in alcohol, but slightly soluble in water and ether. When the tongue is touched with it, the taste is completely lost for sweet and bitter. The subjects of the experiment are incapable of perceiving the taste of quinine or of sugar, while that of acid, salty, astringent or spicy substances is completely recognized. Availing himself of this fact, Quirine recommends, before administering bitter remedies, that the mouth be rinsed with a twelve per cent. solution of gymnemic acid in alcohol and water.

Ichthyol in Gonorrhea.—Jadassou (*Deutsche medicinische Wochenscrift*, 1892, Numbers XXXVIII and XXXIX) speaks highly of ichthyol for gonorrhea in women as well as in men. In thirty-seven cases occurring in females the results of treatment were excellent. He found that in the male uncomplicated specific urethritis was the form of gonorrhea most favorably influenced by his treatment, so he employed ichthyol for gonorrheal urethritis in women, and, as the results were good, he then applied the same substance to the cervix for gonorrheal cervical catarrh. It seems quite safe when used in the early acute stage. Ichthyol can readily be applied to the cervix, and also, later on in these cases, to the endometrium with an ordinary Playfair's probe covered with wool; a ten per cent. ointment is sufficient. The probe may also be used for the urethra; a weaker preparation—from one to ten per cent.—is needed. It may, however, be injected, and in some cases, the urethra should be packed with gauze dipped in the ichthyol, and introduced through a urethral speculum.—*British Medical Journal.*

A Novel Competition for Nurses.—In the course of the discussion on nurses' homes, which took place at the International congress at Chicago, Dr. Billings, the president, expressed the view that it was about time that women manifested the latent power claimed for them in a practical and definite form. Architects and male experts had exhausted their ingenuity in designing nurses' homes, and he thought it would be well to invite the exhibition of woman's latent power by urging the superintendents of homes for nurses and training-schools to elaborate plans and enumerate each item which a model nurses' home and training-school should contain. The editor of *The Hospital* has adopted Dr. Billing's suggestion, and has decided to organize a competition which will be open to any women engaged in nursing from any part of the civilized world. The following are the details of the proposed competition: Two prizes, namely, a first prize of seventy-five dollars (fifteen pounds) for the best plan sent in for competition, and a second prize of twenty-five dollars (five pounds) are offered by the editor of *The Hospital*, London, England, for competition among lady superintendents, matrons, and nurses in the British Empire, the United States, and the countries of Europe. Competitors must send in the proposals in type-written form, which must consist of two parts: (1) A statement setting forth categorically all the rooms and accommodation which are necessary in order to make the proposed nurses' home a model of what such an establishment should be where room is provided for from fifty to one hundred nurses; (2) A second statement and plan prepared in similar form, which provides accommodation for from one hundred and fifty to two hundred nurses. Each of these specifications, (1) and (2), must be accompanied by plans drawn to a uniform scale, and must explain how the proposed home for nurses can be extended, should the growth of the establishment render such a step necessary.

Conditions.—(1) The competitors must send their names and addresses by November 1, 1893, to Dr. J. S. Billings, United States of America, Washington, District of Columbia, and all plans and proposals presented for competition must reach Dr. Billings, not later than January 1, 1894. (2) Dr. Billings, Dr. Henry M. Hurd, superintendent of the Johns Hopkins hospital, Baltimore, Maryland, and Miss Sophia S. Palmer, superintendent of the Garfield hospital, Washington, District of Columbia, are appointed as the judges of the papers and plans submitted in this competition, and their decision will be final. Should the papers and plans submitted demand such a course, the judges reserve the right of withholding any award. (3) All proposals must be type-written on one side of the paper only, and all plans must be drawn to the uniform scale of one-eighth inch to one foot.

Special Note.—It is proposed to publish an account of the competition, with a selection from the competing plans, such publication to be undertaken by the *Scientific Press* (limited), 428 Strand, London, W. C., at their option, to whom papers and plans will be sent by the judges after they have made their award.

JOHN HUNTER AS A CANNIBAL.—Mr. Herbert Rendell, of Saint Johns, Newfoundland, has drawn our attention to an interesting incident in the life of John Hunter recorded in "Cartwright's Journal of Transactions and Events during a residence of nearly sixteen years on the coast of Labrador." Three volumes, quarto: Newark, 1792. The reference in question is in Volume I, page 271. On Cartwright's return from his visit to Labrador he brought home with him a small party of Esquimaux. These were all evidently invited to Hunter's house to dinner, as the following extract shows: "Being on a dining visit with that excellent surgeon and anatomist, the ingenious John Hunter; in the afternoon Attuiock walked out of the room by himself, but presently returned with such evident marks of terror that we were all greatly alarmed, fearing some accident had happened to him, or that he had met with an insult from one of the servants. He siezed hold of my hand, and eagerly pressed me to go along with him. I asked him the cause of his emotion, but could get nothing more from him than 'Come along, come along with me;' and he hastily led me into a room in the yard, in which stood a glass case containing many human bones. 'Look there,' says he, with more horror and consternation in his countenance than I ever beheld in that of man before, 'are those the bones of Esquimaux whom Mr. Hunter has killed and eaten? Are we to be killed? Will he eat us, and put our bones there?' As the whole company followed us, the other Indians had also taken alarm before the old priest had finished his interrogatories; nor did any of them seem more at ease by the rest of us breaking out into a sudden and hearty laugh, till I explained to them that those were the bones of our own people who had been executed for certain crimes committed by them, and were preserved there that Mr. Hunter might better know how to set those of the living, in case any of them should chance to be broken, which often happened in so populous a country. They were then perfectly satisfied, and approved of the practice, but Attuiock's nerves had received too great a shock to enable him to resume his usual tranquility till he found himself safe in my house again." The above amusing incident took place in the year 1773. In the list of subscribers to Cartwright's book, "John Hunter, of Leicester Square," is down for a large paper copy.—*British Medical Journal.*

HOBBIES FOR MEDICAL MEN.—Every man should have a "hobby," and medical men should by no means exclude themselves from the rule. "Hobbies" are useful in many ways, and the faculty they have of breaking the monotony of the daily routine of life and occupation raises them to a high position of usefulness in the ordinary concerns of human existence. But of course they have their drawbacks, like everything else, and everyone who has adopted a hobby knows full well that he is perforce compelled to guard against riding it too hard. In some cases undoubtedly the hobby may come to usurp a position to which expediency, at all events, would by no means relegate it, and then the time comes when steps must be taken to act in accordance with the dictates of common sense and sound judgment. The general practitioner, however, in the country, of most medical men, has the best opportunity of following some congenial hobby, and his chances in this respect are well enumerated in a recent paper by Mr. Alfred Freer. In hunting counties, as he truly says, the medical man who has sporting proclivities may with advantage in several ways contrive now and then to find a patient somewhere in the neighborhood of the "meet." Thus, by combining business with pleasure, he will come in handy should any casualties occur in the field. Shooting is not to be recommended as an amusement; it has a tendency to entice a general practitioner from his practice for too many hours at a time. Fishing has the same objection. Then there is the keeping of pet animals. Speaking for himself, Mr. Freer never likes to be long without a tame raven, magpie, or jackdaw to strut about the garden and premises. These, no doubt, afford amusement in their way, but it is doubtful whether in the strict sense of the term the contemplation of either or all of these specimens of the feathered tribe would afford that amount of relaxation to the mind of which a hobby must be productive in order to be useful. Of course, by making a special study of these animals it might be possible to learn something of their special modes of communicating with each other, and thus gather endless amusement from their conversation. Again, we are advised that dogs and fowls as pets, are not to be recommended to general practitioners who live in towns. This is a sound piece of advice, which, we imagine, would apply with greater force to the general public than to members of the medical profession. The objection to these animals is the nuisance they create by their nocturnal and early matutinal noises. Coming to indoor amusements, it is pointed out that the game of billiards has for some its fascination, but the drawback to it is that it sometimes leads to prolonged absences from home. Whist is next well spoken of, but the palm is given to chess, which has always the greatest charm; moreover, it possesses "the advantage of being free from objection on the ground of stakes." There is no doubt that the great barrier to the adoption of the useful hobby by many medical men is the want of time to devote to it. Without moments, strictly speaking, of leisure in which to enjoy himself, no busy man can derive much profit from any amusement or occupation apart from his work. But while this is the case, he should at the same time never forget that, as far as possible, he should try to find time for a "hobby" and follow it with sufficient assiduity for the benefit he is certain to derive from it.—*Medical Press.*

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

WHAT SHALL WE DO FOR OUR TYPHOID FEVER PATIENTS?*

By JAMES SAMSON, M. D., WINDSOR, ONTARIO.

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As an excuse for presenting this very brief paper I have to submit first, that the subject is always one of importance at this season of the year, and second, that I have never had an opportunity of hearing the question discussed by as representative a class of practitioners as the members of the Detroit medical and library association. So long as the latest published statistics report two thousand five hundred and thirty cases of typhoid with four hundred and two deaths in a year in about three-fourths of the state of Michigan, so long will this melancholy question be rich in professional interest. I have chosen such a name for the paper as will dispose of all chance for any speculative theories entering the discussion as to the origin of the disease and the history of the germ proper to it, with the modes of its primary operations.

I have simply propounded the inquiry, What shall be done with the patient whose symptoms are those of typhoid fever? Well, by all odds the most important thing to do for him is to rediagnose his case, to make it as nearly absolutely certain as possible that his disease *is* the one suspected; and I would emphasize the statement, that the wonderfully decreased mortality rate in enteric fever would be still considerably lessened if the suggestion I have now made were never forgotten but always most systematically observed. It is so easy, especially at certain seasons of the year, to suspect the typhoid contagion, and so very easy to be mistaken, that the physician's first visit is one of intense interest to his patient, especially with the possibility of something being done now that cannot again be undone. And, too, how often is something else diagnosed and the true virus overlooked to the detriment and danger of its victim. In twenty years of practice I have seen too many cases of meningitis treated for typhoid fever and hurried to their fate by the mistake, and I know that I have seen more than one case of miliary tubercle carried through weeks of typhoid treatment and left to die with what bereaved friends still suppose was the sequela of a disease that never existed. A deeply seated abdominal abscess has often been named typhoid till the inevitable symptoms began to call out too loudly, and I have seen one stubborn case of continued fever that was really pus in a pleural cavity. We all, I suspect, have seen typhoid patients that were being steadily poisoned with quinine, and so-called typhoid patients that were well nigh dying for want of it.

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* Read before the DETROIT MEDICAL AND LIBRARY ASSOCIATION.

Believing as I do that quinine is always injurious to a typhoid patient, it is, I repeat, very important that enteric fever should never be treated as malarial disease, and the distinction, though sometimes difficult, can always or almost always be made pretty positively quite early in the case. The best possible treatment for malarial fever is about the worst possible for typhoid, and the best possible treatment for typhoid is absolutely useless in malaria. It is never necessary, I believe, to diagnose between typhoid and typho-malarial fevers. *There is no such disease as typho-malarial fever.* But, if I am mistaken in this conclusion, and if it be true that the united effect of these two poisons in the same body will result in so mitigating the influence of either poison as to produce a less deadly attack than would either of them alone, then there is surely one law in nature differing from all others.

So thoroughly am I assured from my own observations and experience that about the most common error made in the profession is in the diagnosis of typhoid fever that I would suggest that, except in an epidemic of the disease, every single case should be accepted with great mistrust. If the patient be quite young and the case solitary, suspect meningitis always, or an exanthematous antecedent history. If quite old, remember a great practitioner's advice, given many years ago, to never have a consulting physician see your typhoid patient till you know for certain the condition of the kidneys. If the patient is a young woman, be especially certain it is not a case of miliary tubercle, and this, it is said, is exceedingly hard to know. And as a final reminder in this direction I may add that persistent inquiry, in a very large percentage of cases, will point out the probable source of contagion and furnish a very strong corroboration.

Having assured myself that a case is indeed one of typhoid fever, I have for many years treated it with the least possible medicine, the least possible food, the least possible exertion, and the least possible excess of fever. I have divided my patients in a general way into two principal classes—one including young men and boys from sixteen to twenty-five years, and strong, robust young women of the same age as those most likely to be of a serious type, and a second class including all others. In this first class I have found the symptoms grow more rapidly urgent than at other ages; in them the fever rises higher and sooner, and the wild delirium that means so much in them comes earlier. In this class especially is there apt to be that condition of the bowels that always forebodes trouble, and I have for a long time put all such cases on small doses of calomel continued until the character of the evacuation is entirely changed, and from that time have been indifferent as to whether another single dose of medicine was administered. I have adopted the same treatment in all cases where there were dark or greenish or frequent stools and never follow the calomel with a cathartic of any kind. I have put the patient to bed to not again leave it for a minute till a week after the last vestige of fever, and have never yet lifted a single patient out of bed into a cold bath. I have tried to be always certain that the temperature should not exceed 102° or 102½°, and I have doubted whether a temperature less than this needs to be much interfered with. I have during the past six years given not a single dose of antipyrin, antifebrin or phenacetin to any typhoid patient, and shall always feel that my own experience has been such as to contraindicate the use of these remedies in this particular disease at any stage or in any dose. I am sure their use has to be paid for in the days of convalescence, when a feeble heart has to make such a struggle. I have depended on cold sponging and cool surroundings entirely for my control of the temperature and believe I have always found them sufficient. I have no desire to disapprove of the now famous BRANDT system. It has been marvelously successful when diligently used, but it is difficult of application in general practice and interferes very much with the principle of constant quiet. For house-to-house treatment I shall not adopt it till I am more thoroughly convinced of its particular advantage and until an easier mode of its application has been devised. To produce sleep I have depended chiefly on the cold sponge and have ceased using the bromides. I have not given the smallest dose of opium in any form, or chloral hydrate, in years, and feel now that I never expect to give them again. A few times I have resorted to sulfonal, and a very few only. I have given all patients small doses of nitro-muriatic acid largely diluted, first, because it seemed in the right direction, and again, because it is perhaps well to give all patients something. I have not seen a case of tympanitic abdomen or persistent looseness of the bowels in many years, and have not had a case of intestinal hemorrhage since 1880, and these facts I attribute to absolute quiet and incessant vigilance in the matter of diet. A careful investigation has convinced me that a large majority of physicians recommend about twice the quantity of food I allow my patients, and I, of course, am inclined to insist that they all are wrong. So great a man as DACOSTA gives three pints of milk and a pint of broth a day and arrowroot at midday, and very many practitioners follow close on the same line. My own instructions are that the patient shall have milk and milk only—three half-pints a day and never to exceed a quart. From this rule I never depart till a morning temperature has been normal, and to this and this alone do I attribute the remarkable exemption from bowel trouble and ulcerative disaster that I have experienced.

Three or four years ago a long and very interesting article appeared in one of the leading journals giving the record, treatment, diet and mortality rate of this disease in the hospitals of Philadelphia, New York and Montreal, and I convinced myself, in reading it, that the diet was excessive in them all and that the bowel complications and death-rate were in proportion to this excess, and probably attributable to it more than to any special features of remedial treatment. Why should a patient have an atom more of food in such a disease than will barely help him live through it, and why should not everything possible be kept out of the alimentary canal? In the earlier years of my experience, in treating this disease, I always carried with me a mixture of extract of coto bark rubbed up in mucilage (because it is of little effect in any other form), and depended on it, almost without disappointment, in every relaxation of the bowels. The bismuth I usually added to it may have been of some avail, though I often doubted if it was. A stricter discipline as to diet in latter years has given me very much less occasion to use either of them.

Perhaps the greatest triumphs in the management of severe forms of typhoid fever are those achieved toward the far-off end of the disease, when a very feeble and rapidly failing heart, that may not even have been poisoned by antipyretics, warns us how close a place the patient has to pass through yet to escape. I need not repeat to you that it is now that stimulants and nux vomica and quiet and no mistakes can come so nearly performing a miracle. It is now that you can single-handedly fight away the grim monster, if only the bowels are not harassing the victim. There are those practitioners, and there are very many of them, who give stimulants long before the heart fails; but I desire to express a strong doubt as to the wisdom of the method. The human system longs for alcohol as it does for nothing else, when the proper time has come and utilizes its every element; but I offer it as a demonstration of this law, that whenever the physician can discover the odor of alcohol in the breath of his patient, no matter what the disease or what its stage, he may safely accept it as a reminder that the prescribing of it was a mistake.

I need not say that once a normal temperature has been touched, nutritious fluids may be gently added to the patient's diet, nor need I say how long he should still lie absolutely quiet, except to add that I have never seen but a single case of relapse of the fever that was not certainly due to exertion or excess of food, and I have but little faith in calling any condition a true recurrence of the original disease.

I have said nothing of all the other complications that may come all along the way, nor need I allude again to the horrors of the discovery about this time that the case never was one of enteric disease. All these are emergencies in which the skillful and *cunning* practitioner knows what best to do. And then come all the sequelæ, which will, I believe, be serious or numerous or absolutely wanting, in exact proportion, or well nigh exact proportion, to the wisdom and caution with which the case has been managed from the onset of the disease.

In conclusion I may add that this paper has been written that I may learn some useful lesson from its discussion, and that I may have an opportunity after much experience of emphasizing as strongly as words may do it my strong conviction that errors in diet are the most common and the most deadly in the management of enteric fever. If I should tomorrow suspect myself the victim of the typhoid contagion, I would select my surroundings and my nurse with all speed and the utmost care and go at once to bed. I would send for a physician whom I felt sure was strong in general practice more particularly than in this one disease. I would ask him to look most carefully for those three or four symptoms that may almost always be found, and by exclusion to eliminate every other possible condition, and unless my case was likely to be an unusually mild one, would suggest his prescribing small doses of calomel for two or three or four or six days, according to the severity of the onslaught, and that not another dose of medicine be given me till I was well again. I would beg his promise that nothing but desperation would tempt him to give me a single dose of any antipyretic or opiate. I would secure his promise to see me every day in his careful lookout for complications, and to resort to stimulants with a free hand when he knew the time had come. I would ask my nurse for from twenty-four to thirty ounces a day of milk and enough of clear cold water, and would warn her that my temperature must never remain at 103°. I would remind her how often a tepid sponging will make a restless patient sleep, and then I would lie down with a strong confidence that there were a good deal more than ninety chances in a hundred that on the morning of the twenty-sixth or twenty-seventh or twenty-eighth day my temperature would again be normal and all be well.

PHOTOGRAPHY IN MEDICINE.*

By PRESTON M. HICKEY, M. D., Detroit, Michigan.
SECRETARY DETROIT MEDICAL AND LIBRARY ASSOCIATION, ET CETERA.

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THE physician of centuries ago was supposed to employ the powers of darkness in the mixing of his mysterious concoctions; the physician of today makes use of the power of light with its chemical energy, not perhaps in the practical mixing of potions but in the theoretical part of his work, when he wishes to impart information to his fellow-practitioners. The faculty of describing in its entirety what we see, the ability to produce in the auditor by skillful word pictures a mental impression like to the original, is possessed by very few. The gift of making satisfactory drawings is granted to few also, and is always accomplished at the expense of considerable time. Right here is the province of photography. It counterfeits the original and presents light and shade to the eye in such a way that definite and reliable impressions are given to the brain. The work is done rapidly and the time that would be expended in elaborate descriptions or drawings is saved. This power of photography has its extension into the domain of medicine, and of this we shall speak very briefly.

In the time of the cumbersome and unclean dry-plate process there was little inducement to the physician to make use of photography in his profession. The introduction of the dry-plate with its easy and clean manipulation has popularized photography so that its use is now within the reach of all.

Every physician who is at all alive to the needs of his profession realizes the benefit to be derived from descriptions of the cases of his fellow-practitioners and also the necessity of recounting those of his own having an interesting element.

In recording surgical cases especially is photography useful. The reasons for this are self-evident. Of course, where a lesion is external it shows in a picture, whereas a fever case would have nothing characteristic. By taking a picture before an operation and having one to compare which is taken subsequently, the surgeon has a valuable means of self-protection which cannot be gainsaid. In describing operations more can often be clearly shown by one picture than by pages of text.

Of especial value is the use which photography can be put to in the description of nervous diseases and the various phases of insanity. The look of cunning or of imbecility can be caught in an instantaneous photograph and reproduced for the benefit of the practitioner who has not the opportunity of seeing many cases, or of the student who wishes to perfect himself in that line.

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*Read before the DETROIT MEDICAL AND LIBRARY ASSOCIATION.

The different attitudes and gaits of those afflicted with lesions of the spinal cord are thus easily and accurately pictured.

In a photo which I here present to your notice we see the characteristic look of despair in an individual who realizes that he is afflicted with an incurable disease. The case is one of carcinoma of the pharynx, and the swelling on the side of the neck is an infected gland with subsequent cystic degeneration.

The aid which photography gives in the description of unusual cases is well illustrated by the print which I have here of a woman with supernumerary mammary gland. The comparative size and location are impressed at a glance upon the observer.

Photography of the larynx is one phase of the subject which has been attended with great difficulty. DR. THOMAS R. FRENCH has worked on the problem in this country for the last fifteen years, but his results and those of his fellow-laborers have well repaid the expenditure of time and money. The image of the larynx can usually only be seen by the one holding the mirror, so that the tyro can only see what his own imperfect efforts reveal. Attempts at description are not very satisfactory owing to the complexity of the parts. In the second volume of "BURNETT's System of Diseases of the Ear, Nose and Throat," which I have the pleasure of showing here, the reproductions of diseased conditions of the larynx made from photographs can well be compared with the diagrammatic drawings with which we are accustomed.

In the presentation of a pathological case it is very advantageous to be able to show the original specimen. Yet how often is this accompanied by inconveniences of conveyance arising either from the size of the specimen or from the leakage of the fluid in which it is preserved. As we all know by bitter experience the preservation of pathological material is attended with many difficulties. Unless there is great care exercised in the choice and changing of the preservative fluid the material is often discolored, while the fluid becomes so muddy that it loses its transparency, or, perhaps, escapes by evaporation; the jars also are expensive and liable to break from handling or from the freezing of the preservative fluid.

All this bother can be dispensed with if a good photo is taken in the first place. Copies of this can be handed around and the characteristic points noted while the exhibitor is talking. Usually by the time a specimen is passed half way around the speaker has finished and is followed by some one else, so that one-half of the auditors either lose interest in the specimen or fail to follow the second speaker. The expense of a photo is much less than that of a proper jar and fluid, and when the economy of space and the ease of transportation are taken into consideration the saving is very great. I have here a print of a surgical kidney which illustrates well the points which I am trying to make. We gain a good idea of the various pathological features while we are not troubled with the fluid leaking out or by any disagreeable odor remaining on our fingers. What is also an important consideration, the original specimen has not been pulled around and stuck full of matches. Much valuable material has been lost for further exhibition by the careless handling of the examiners.

While we have thus briefly referred to some of the uses and applications of photography in medicine, we would further remark upon the comparative ease of manipulation and the slight cost of the required instruments. Any one of the numerous hand cameras upon the market will, with proper care, take really good pictures. They are admirably suited for photographing patients, diseased members, et cetera. They are easy of manipulation and by following the directions very good pictures can be taken, even from the beginning. For photographing pathological specimens a camera with a long bellows or extension is necessary when it is desired to produce the natural size. The secret in taking photographs is in paying proper attention to the lighting. To secure the very best results a room with a skylight is necessary, but an apartment having good, high windows will answer, or the open door will secure a deal of additional light. Direct sunlight should be avoided on account of the deep shadows which result. The length of time which a plate should be exposed varies under different conditions and can be best learned by a few lessons under a competent instructor. Unless the operator has plenty of time and proper facilities for fitting up a dark room, he will save much time and many plates by taking his exposed plates to a professional to be developed and printed from. However, if he will be satisfied with blue prints he will find that process simplicity itself and also very cheap.

In photographing tumors, et cetera, if the surface is washed off with alcohol or if the specimen is allowed to lie for twenty-four hours or longer in spirit we avoid the glistening spots of moisture which reflect the rays of light so vividly and consequently show so distinctly in the prints. A very neat way to accomplish the same thing with small specimens is to immerse them under water in a shallow dish of glass supported by three buttons over a sheet of white paper. In this way the light is reflected from below while all the different parts are equally illuminated and reflect the light evenly. The camera must, of course, be secured in a vertical position. A very nice way to help the observer in forming a correct idea of the size of the object, is to place a tapeline along-side so that it will also show in the print.

Micro-photography is a branch of the subject which has peculiar fascinations for its devotees. It is a branch which, unless cultivated in a very primitive manner is very difficult of acquirement and requires considerable apparatus. To be sure, very fair pictures can easily be secured if one is satisfied to use only the lower power objectives, as for example, the one-inch. But when we attempt to use the higher powers, as the one-fifth-inch objective, we must make use of very exact apparatus and the very best methods of illumination, or fail to secure pictures which are worth looking at. But whether easy or difficult of acquirement, micro-photography is rendering to the scientific world a vast deal of good. The works on histology, both normal and pathological, have been and many are yet filled with diagrammatic drawings which are in some instances positively misleading. This was caused from the fact that in making the original drawing, parts which, perhaps delicately merged the one into the other without any sharply defined boundaries, were represented by distinct lines. The student cons his book and pores over the illustrations, and is surprised when he comes to look through the microscope to find the absence of those sharply outlined cells which he has been accustomed to see. We often hear the remark about microphotographs, that "they are so unsatisfactory to look at." Now, the trouble is not with the photo but with the individual who makes the remark. His idea of how the picture should appear is derived not from a careful study of the object with the microscope but from the diagrammatic prints of his old text-books.

Another argument in favor of micro-photography is that it eliminates the personal equation, which often creeps in even where it is least expected. I present for your inspection one or two micro-photographs which will, perhaps, impress this point more forcibly than anything which I can say.

There is one phase of the subject which I will just mention, the recreation that can be obtained from out-of-door photography. It is a pursuit which is very fascinating and which leads to the taking of exercise that is not fatiguing. It is suited to the old and young. Accordingly if you have a patient whom you wish should spend much of his time out of doors, advise him to buy a camera.

A CLINICAL STUDY OF PARALYSIS AGITANS: WITH A CASE OF RECOVERY.*

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Paralysis agitans is a disease of the nervous system characterized by involuntary tremors or shaking movements of the limbs, head or trunk of the body of a spasmodic nature; by diminished muscular power or paresis (not the general paresis of the insane), and in an advanced stage of the disease by a disturbance of equilibrium shown by a tendency to stoop forward and an accelerated walk. The tremors constitute the most distinctive feature of the disease. In the first stage of the disease the tremors and paresis affect either the arm and hand or, perhaps, the leg or the head. Secondarily, the tremors become generalized, and finally affect the whole body. The disease is very insidious and progressive and the tremors tend, as the disease advances, toward convulsive activity. Sleep relieves the patient, as then there is a cessation of the convulsive tremors. The forward stoop is caused by paresis of the extensor muscles of the back, and the muscles become rigid and contracted, as do also the muscles of the extremities. There is a verbal paralysis to some extent. If the disease progresses to a fatal termination, the patient wakes up greatly frightened in the night by the convulsive agitation appearing even then, and the poor sufferer is finally completely exhausted. The cutaneous sensibility is not affected in paralysis agitans, neither as a rule are the special senses, nor the integrity of the intellect. The disease comes on in advanced life generally.

All writers upon diseases of the nervous system concur in the statement that with a few rare exceptions this disease is incurable. Dr. J. Russell Reynolds, of England, has reported one very interesting case of cure by the continuous or galvanic current, and also Remak has reported one.

The diagnosis is easy, as in other tremors the trembling does not occur when the parts are not in use and are supported. The non-senile form may occur in early life, but there is no fatal tendency and the tremors disappear, except when voluntary movements are attempted and there is no disturbed equilibrium or forward stoop. Hysterical paralysis agitans is accompanied by other hysterical symptoms. Intermittent paralysis agitans in the young is removed by anthelmintics, as it generally depends upon intestinal worms. Chorea is a widely different disease and is not liable to be confounded with paralysis agitans.

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*Read before the Pan-American Medical Congress, Washington, September, 1893.

The lesion in the fatal cases would seem to consist progressively of irritation, congestion, and finally sclerosis and atrophy of the motor nerve centers, while in the cases on record that have been cured the trouble was probably functional and had not progressed beyond the stage of impaired nutrition, irritation and congestion of the motor nerve centers. An atrophic condition of the spinal cord, pons Varolii, crura or medulla oblongata has been found in several careful dissections of those in whom the disease has proved fatal, and also sclerosis and patches of grey degeneration. It is possible that in some cases *multiple sclerosis* may be mistaken for paralysis agitans. The former disease, however, rarely occurs after thirty years of age, and generally between twenty and twenty-five years of age, and is more common in women than in men, while the latter disease generally attacks the male sex more frequently.

The earliest symptom of multiple sclerosis is rhythmical tremor, but this trembling generally disappears as paralysis supervenes. The eyes are involved, the vision being indistinct and double vision occurring; the speech is slow and drawling; vertigo is a marked symptom; paresis of the lower limbs, terminating in true motor paralysis, is a marked symptom; there is contraction of the limbs; the general expression changes, and the mind becomes weakened, and finally death occurs from failure of the nutritive functions. It will be seen that aside from the tremblings of the head, neck, trunk and limbs, which come on *only when the muscles are being exerted*, in disseminated sclerosis, the two diseases have no features in common.

CASE OF PARALYSIS AGITANS, WITH RECOVERY.

Mrs. ———, aged fifty years, was admitted to our private hospital suffering from paralysis agitans. The disorder had come on gradually, as the result of domestic unhappiness and grief, and had finally terminated in a condition of subacute mania, complicating the case very much and very seriously. At first I gave a very unfavorable prognosis concerning it. At the time of admission the trembling was incessant and involved all the limbs. There were delusions of suspicion and dread and fear of persecution—in other words, marked mental disorder. There were hallucinations of sight and hearing. There would be exacerbations of the tremblings, due to emotional disturbance. There was marked muscular rigidity and contraction, so that the head was thrown forward and fixed, and the trunk was also bent forward. Walking seemed very difficult, and also talking. The muscular force and the cutaneous sensibility were normal, so far as I could ascertain. There was marked tremulousness of the tongue when protruded. The trembling at first attacked one hand and arm and gradually spread all over the body.

I considered the case a very unfavorable one and, probably, hopelessly incurable. I directed warm baths with cold affusion to the head at night, opened the bowels freely with a mercurial cathartic followed by salines, and then put my patient practically on a milk diet and secluded her from all society save that of her nurse, and directed the latter to administer, three times a day, drachm doses of sodium bromide and tincture of hyoscyamus. Fortunately I obtained a very good article of hyoscyamus, and I soon found to my surprise that my patient was improving very much. Electricity in the form of central galvanization and also a bitemporal current were employed daily.

The mental excitement soon began to disappear, the muscular tremblings gradually subsided, very much in proportion as the mind became quiet, and at the end of one month I saw that my patient was rapidly improving. I accordingly allowed her to take moderate exercise in the open air, and put her on a full proteid diet consisting of milk, eggs, meats, fish of all kinds, including the crustaceæ and molluscæ, cheese, et cetera, with a minimum only of vegetables and starchy foods, as I wished to give her as much energy and force as possible by food with the least expenditure of oxygen by the system to digest and assimilate it. The rigidity and contraction of the muscles disappeared gradually, the gait becoming assured, the head coming up erect and also the trunk. The speech lost its tremulousness, and the face assumed a much more bright and intelligent expression.

At the end of the second month all mental disturbance had passed away, the mental faculties remaining normal. I now discontinued the use of the sodium and hyoscyamus and also the central galvanization, substituting instead the induced current in the form of general faradization, using it as a nerve stimulant and tonic. I considered that by the constant current of electricity I had removed the nutritive defect in the central nervous system, improving the tone and nutrition, not alone of the brain and cord, but also of all the deeper tissues of the body. A tonic containing quinine, phosphorus and strychnine was now ordered, also cod-liver oil and maltine and the hypophosphites, and the patient's weight increased materially during the third month of her stay with me.

At the expiration of the third month the patient was discharged perfectly well, not a trace of trembling being visible in muscular action, speech or gait. The mental faculties were perfectly restored. I do not know that I should, in another case, get such a favorable result. The patient has since remained perfectly well.

My success in this case warrants me in expressing the hope that such cases may have the benefit of long, continued application of electricity. PROFESSOR CHARCOT considered it probable that the morbid anatomy of many of the cases that go into a fatal termination, consists of obliteration of the central canal of the cord by increase of its epithelial lining, or overgrowth of the neuclei which surround the ependyma and marked pigmentation of the nerve cells, principally those of CLARKE's posterior vesicular columns. In my case, if the paralysis agitans had depended upon an atrophic condition of the spinal cord; pons Varolii, crura or medulla oblongata, or, in other words, had depended on organic changes, I do not think a cure could have been obtained. On the other hand I am inclined to think that if there was degeneration, due to the nerve formation of connective tissue compressing the cord and nerve structures, the constant current by its catalytic effects, could have had the power to remove such new formation, freeing the compressed nerve structure. My case, moreover, may have depended on congestion of the nervous substance or the membranes of the upper part of the medulla spinalis, oblongata and pons, which had not gone on to sclerotic atrophy and the galvanic current unquestionably would have relieved that condition permanently. I not only had to combat disease of the motor centres, but also of the intellectual centres. I considered my case to have been one in which there was weakness and irritability and instability of the molecular nerve substance of the nerve-centres, owing, perhaps, to malnutrition, and that the disease was functional in character rather than organic. If so, then we may say there are curable functional cases of paralysis agitans. My patient had not a rheumatic diathesis, or any other morbid diathesis which could have predisposed her to the disease.

I ask the indulgence of those who may think that I have devoted undue space to a single case.

TYPHOID FEVER AND ITS TREATMENT WITH COLD WATER BATHS.*

BY F. C. MYERS, M. D., KALAMAZOÖ, MICHIGAN.

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TYPHOID FEVER is an infectious disease characterized by hyperplasia and ulceration of the lymph follicles of the intestines, swelling of the mesenteric glands and spleen, and parenchymatous changes in other organs of the body. The clinical symptoms of the disease are marked by fever, a rose-colored eruption, diarrhea, tympanites, delirium, et cetera.

History.—In 1813 PETTIT described entero-mesenteric fever. In 1829 LOUIS, of Paris, gave the name "typhoid" to the fever. At this time typhoid fever alone prevailed in Paris, and it was supposed to be similar to typhus fever of Great Britain, and the intestinal lesions were regarded as an accidental occurrence. To a certain American physician, of Philadelphia, by the name of GERHARD, is due the honor of first having clearly laid down the difference between the two diseases. His papers in the *American Journal of Medical Sciences* are the first in any language which give a full account of the clinical and anatomical distinctions we now recognize. In 1833 JAMES JACKSON, junior, of Boston, who had just returned from Paris, demonstrated the identity of the typhus of this country with the typhoid of LOUIS. In 1838 and 1839 two elaborate descriptions of typhoid fever were issued from the Massachusetts general hospital by JAMES JACKSON, senior, and ENOCH HALE. These, with GERHARD'S articles, contributed to make typhoid fever as distinguished from typhus widely recognized in the profession here long before the distinction was recognized in Europe.

Etiology.—Typhoid fever prevails in all temperate climates and is widely distributed throughout all parts of the United States and Canada. It prevails to a greater extent during August, September and October; therefore is called the autumnal fever. Its occurrence is more frequent in hot and dry seasons. Males and females are about equally liable to the disease. The greatest susceptibility is between the ages of fifteen and twenty-five. Cases are rare over sixty. It is not infrequent in childhood, but infants are rarely attacked. As shown by KOCH, EBERTH and others, there is a specific microörganism constantly associated with typhoid fever. It is a short, thick bacillus with rounded ends, in one of which can be seen a glistening round body believed to be a spore. The bacilli inoculated into the blood of rabbits give the characteristic symptoms of typhoid fever, and the ulcerative condition of the intestines is also produced. The bacilli may be found in the intestines, the mesenteric glands, and the spleen and liver. Outside of the body they retain their vitality for weeks in water, and in milk they undergo rapid development without changing the appearance of the fluid. They may increase in the soil and retain their vitality for months. They may also live in ice for months; therefore you can not freeze them out.

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* Read before the KALAMAZOO ACADEMY OF MEDICINE.

Mode of Conveyance and Contagion.—Typhoid fever is not very contagious, as you all know. The greatest source of contagion is through the discharges. The most common mode of conveyance is through water infected by the germ, as illustrated by a recent outbreak of the disease at Ironwood in the northern part of Michigan. By investigation DR. H. B. BAKER, secretary of the state board of health, discovered that the water supply at that place—a city of about twelve thousand inhabitants—was at fault. He discovered that the pipes were clogged and the reservoir was overflowed, and the water which was carried to the inhabitants had become contaminated with human excreta and decaying animal and vegetable matter. A sample of the water was sent to the state laboratory of hygiene, at Ann Arbor, and was reported by the director, PROFESSOR VAUGHAN, to contain pathogenic microörganisms which caused the death of white rats into which it had been injected, the rats having inflamed intestines and enlarged spleens as did the persons who were sick at Ironwood. Milk is also a source of infection; it may be contaminated by infected water used in cleansing the cans.

As the *symptoms*, *diagnosis*, *prognosis*, et cetera, are well known by all of you, I will pass them by and draw your attention for a few moments to the treatment. I will only say in regard to the diagnosis that it has been very difficult for me to diagnose many cases earlier than the end of the first week.

Treatment.—Systematic cold bathing is the only treatment employed in many of the German hospitals when the patients are brought to them during and after the third week. At the German hospital of Philadelphia one hundred and sixty cases were treated in sixteen months and the total number of deaths were eight, or a mortality of five per cent. Relapses occurred eleven times. The average number of baths were about forty-two; the smallest number were eight or ten; the greatest number one hundred and forty-five. The average number of days in the hospital (of the non-fatal cases) were thirty-five. The ages ranged from thirteen to forty-two. The death-rate at that particular hospital has been reduced nearly fifty per cent. by employing the cold bath treatment.

The cold water treatment was introduced at the end of the last century by CURRIE, of Liverpool, and of late years forced upon the profession by BRANDT, of Stettin. The BRANDT method consists in sudden immersion of the patient into tepid or cold water, accompanied by vigorous rubbing, the details of which will be given farther on.

In a paper recently read by DR. GILLMAN THOMPSON, of New York, he gives his experience in the treatment, by the BRANDT method, of ninety-five cases of typhoid fever at the New York and Presbyterian hospitals. Out of three hundred and forty cases treated by other methods at the Presbyterian hospital, previous to this, from 1882 to 1892, there was a mortality of seventeen and eight-tenths per cent., and out of five hundred and one cases treated at the New York hospital by other methods, from 1877 to 1889, there was a mortality of nineteen and four-tenths per cent. Ten years of "expectant" treatment among one thousand three hundred and five cases in various New York hospitals showed a death-rate of between twenty and thirty per cent. By the BRANDT system the mortality of typhoid fever in both the above institutions has been reduced to seven and five-tenths per cent.

The bathing or "tubbing" as employed by DR. THOMPSON is as follows: A portable tub on rollers is placed at the bedside of the patient and partly filled with water at 70° Fahrenheit. When the patient's temperature rises to 102.5° Fahrenheit, he is given one-half ounce of whisky and in a few minutes is lifted, naked, into the tub in which there is enough water for the complete immersion of the body. In some cases cold water from a pitcher is poured upon the head. The patient is left in the tub for fifteen minutes, during all of which time he is vigorously rubbed over the entire body. He is then lifted onto blankets into the bed and rubbed dry. After this he is given a glass of hot milk with malt extract and left to sleep, which he usually does, owing to the soothing effect of the bath. Between the baths the patient lies on a blanket and is covered only by a sheet to favor evaporation from the surface.

If the treatment is begun early many patients do not require more than a dozen or fifteen baths. In bad cases they should be given once in three hours, day and night. The temperature begins to gradually fall after the baths, until a reduction of between two and two and one-half degrees Fahrenheit follows, and remains low for two or three hours, when it again may rise slowly.

In the ninety-five cases treated by DR. THOMPSON, seven deaths occurred from the following causes: Four from intestinal perforations and peritonitis, two from hemorrhage, and one from pneumonia. The cause of the fatal cases was in no way attributed to the baths. Among the complications observed were intestinal hemorrhage in six cases which recovered; bronchitis and otitis twice; burrowing ischio-rectal abscess, and a large abscess of the thyroid gland. Several cases, which recovered, had temperatures ranging above 106° Fahrenheit before the treatment was commenced. The other patients all did extremely well. The chief characteristic of nearly all of the cases treated by bathing was the absence of the nervous symptoms so commonly observed, such as stupor and delirium, subsultus, et cetera.

My own experience with typhoid fever has not been very extensive yet, but in the cases which I have treated I have found more satisfaction in the use of cold baths than any other mode of treatment. Out of the number which have come under my care I will only mention three, as the cold baths were used more particularly in these cases:

On September 16, 1892, I was called into the country, eight or nine miles, to see W. B., a male, aged about thirty years, who was taken with a sudden and excruciating pain in the right iliac region. The pain continued two or three days with a high temperature, which gradually began to assume a typhoid nature, rising two or three degrees about noon, and falling toward morning.

About the fifth day he was put into a covered wagon, on a bed, and removed to Kalamazoo, where I saw him once or twice a day during the remainder of his sickness. On the fifth or sixth day I ordered the patient to have a bath in water, with the chill taken off, every three hours, when his temperature was above 103° Fahrenheit. From this time until his fever began to abate he received the baths as directed. When he felt strong enough he was placed upon a stool in a tub of water, by the side of the bed, and the water gradually poured over his body for ten or fifteen minutes. If he did not feel strong enough to leave the bed he was given a sponge bath in bed, and cold water was applied to his head and neck, and poured on his wrists from a pitcher held at some distance above.

The patient would usually fall into a quiet sleep after the baths, and the temperature would fall a degree or two in a short time. About all the medicine I gave this patient was one or two doses of calomel at first, and then tonic doses of quinine and an astringent for the diarrhea when necessary. He did well, and the fever began to abate about the end of the fourth week. He developed a great appetite and sat up part of the time, but at the end of the fifth week I was suddenly summoned and found him in a state of collapse, with a cold surface, a weak and feeble pulse, and a great amount of tympanites, et cetera. I decided there had been a perforation of the bowel which was corroborated by a brother physician. Intense peritonitis set in and the patient died the next day. I think the perforation was caused by eating something unsuitable. The patient did as well as any case could do up to the time the peritonitis commenced.

My second case was Miss E. K., city, aged fifteen years. I was called to see her February 15, 1893. She had been under the care of another physician for a week before I saw her, and he had treated her for malarial fever.

When I first saw the patient she had more of the symptoms of malarial fever than any other, but typhoid symptoms soon became distinct and I put her on the cold water treatment. I directed the parents to give her a cold bath every three hours, commencing about noon each day and continuing until midnight, or later, if necessary. The patient was very frail and anemic when the fever commenced, so I gave her tincture of iron and tonic doses of quinine all the way through. I also gave her sulphocarbolate of zinc some of the time. Her fever continued about four weeks and then gradually began to abate. At first her temperature would rise to 104° Fahrenheit, but it was kept down by the baths and she made a splendid recovery. When the fever began to abate there was considerable weakness of the heart which was overcome with tonics and digitalis.

The young lady's sister, aged about twenty-one, was taken violently sick with the fever soon after, and died within two weeks from intestinal hemorrhage. As I did not attend her I do not know whether she had the baths or not, but do not think she had.

My third case was Mrs. M., city, aged twenty-eight, who was taken sick July 28, soon after returning from the fair at Chicago. She had complained of general lassitude, pain in the back, headache, diarrhea, et cetera, for a week previous. Her fever assumed an irregular form, as some cases do. Her temperature began to rise early in the morning and it reached the maximum about two o'clock P. M. From this time it began to abate and was at its minimum during the night. The diarrhea was quite bad at first, the bowels moving from twelve to fifteen times during the twenty-four hours, unless controlled with bismuth and opium. There was great irritability of the stomach for the first two weeks; there was also some low muttering delirium, especially before the baths were given regularly. From about the middle of the first week baths were commenced and given at regular intervals when the temperature was above 102½° Fahrenheit. The temperature would range from 103° to 105° Fahrenheit before the baths, but would always fall from one to three degrees after the baths, and the patient would fall into a quiet sleep and remain so for two or three hours. After the baths were given regularly there was scarcely any more delirium. The patient's fever began to abate at the end of the fourth week, and at the end of the fifth week had disappeared entirely.

In this case the patient did not feel strong enough to leave the bed to take the baths, so she was given sponge baths some of the time, and was wrapped in a wet sheet some of the time. Cold water, just from the hydrant, was poured on the wrists with the pitcher held at some distance above, and also cold water was applied to the head and neck at the time the baths were given, and usually once or twice between times. In this case I gave scarcely any medicine at all. A little opium and bismuth were administered at first for the diarrhea and a tonic after the fever began to abate. She made a splendid recovery without any complications.

This paper has not been written with the idea of advancing anything new upon typhoid fever or its treatment. We will leave that for the specialist. As I said in the beginning of the paper, the cold water treatment is an old treatment, but, perhaps, like many old theories, it has been cast aside by many of the profession for the use of something better and more advanced. After other things have been "tried and found wanting" BRANDT has led the way back to cold water; and as there has been no specific or balm in Gilead found which will cure typhoid fever, let us use the means which will carry our patients through most safely and comfortably and shorten the course of this long and tedious disease.

LECTURES.

TERMINAL DEMENTIA: EXPOSURE TO LEAD; NEUROTIC HEREDITY.

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THE young man who now comes before us is an inmate of a hospital for the insane, where he has been confined for the past three years. He is accompanied by an attendant. You observe his quiet manner and the general air of intelligence about him. At first sight it scarcely seems possible that there should be anything the matter with him serious enough to require his detention.

His mother, who accompanies him, says that the family history on the paternal side is free from neurotic heredity, but three maternal uncles were inebriates, and one was a complete wreck. Now, it makes no difference what answer you make to the *questio vexata*, is inebriety a disease? It is safe to assume a neurotic heredity where inebriety appears in the ancestry. As a child we learn that he was nervous and early developed a decidedly artistic talent. He is twenty-seven years of age, and was married six years ago; has two healthy children. Some seven years ago he took up house-painting and decorating, and we learn that for more than four years prior to the outbreak of his mental trouble he was engaged in mixing and using lead-colors. We are not able to obtain a very clear history of the mental trouble which first sent him to the hospital three years ago, but we learn that he was restless, noisy and sleepless. The patient remembers nothing of what took place then nor for some weeks afterward. It is probable that the attack was one of simple mania. After some months he was in substantially the same condition in which you see him today.

On questioning him regarding his early history and recent events it is apparent that his mental processes are exceedingly slow and labored. He knows that he has two children, but cannot give their ages or state where they were born. On being asked how old a person would be now who was born in 1887, he answers three years. He shows more deficiency in this respect than is normal in a man of his previous social condition and education. The loss of memory does not extend to positive gaps, but simply that there is slowness in recalling things, and that the outlines are indistinct and blurred. This condition is very different from that noted in paretic dementia in which lacunæ are found, in which events, names and dates are often completely obliterated. No delusions can be elicited, and there is absolutely no trace of emotional disturbance. The bodily health is excellent, the appetite, circulation and digestion, and eliminative functions are admirably carried on. There are no signs of somatic disturbance in the nervous system.

It is apparent that we have here a case of terminal or secondary dementia, a class composing such a large proportion of our asylum population. You may well ask, why, if the young man is so quiet and well-behaved, he is not allowed to leave the hospital. This has been tried, but each time that he comes out he is soon excited, incoherent and noisy, and has to be returned to the hospital. In a few hours or days he is again quiet. This is quite characteristic of many of the terminal deteriorations. As long as they remain in the hospital they are quiet and even useful; but as soon as they come out in the world their weakened mental state gives way, the emotions become exalted, and they then present a secondary confusional insanity.

The young man confesses to a venereal infection some ten years ago. On examination we find several deep scars on the side of the glans penis. So far as he can remember there were never any signs of secondary syphilis. The character of the attack, depth and extent of the scars and absence of all glandular involvment would lead us to think that we had a case of chancroidal disease without systemic infection. There remains therefore the two remaining factors to be considered, the heredity and exposure to lead. We learn that there have been obscure pains about the loins and abdomen for years. They are less now. We need hardly look for the blue line on the gums or other evidence of recent lead poisoning. They have long since disappeared. The psychoses directly caused by lead are usuallly accompanied by degeneration of the nerve elements of the brain and the general picture of paretic dementia. We should hardly look for psychoses of this kind as a direct result of lead, but it is to be remembered that like other toxemias there is a profound nutritional disturbance. This, in connection with the neurotic heredity, which is further shown by the stigmata of degeneration, an asymmetrical skull and small and badly shaped ears, are sufficient to account for the mental overthrow.

The prognosis in these terminal deteriorations is exceedingly unfavorable. Nothing is to be looked for from drugs. By a long process of training and education in a case no worse than this he may be able to live outside of a hospital and pursue some simple occupation. But he will always show that he is a damaged man, and there will be a tendency to fall into a secondary confusional state.

EDITORIAL ARTICLES.

ADDISON'S DISEASE.

In 1855 **Addison** described a disease characterized clinically by progressive asthenia, by great liability to emesis, and usually by a peculiar bronzing of the skin. No satisfactory theory of the nature of this disease has been advanced and during the last few years opinion has fluctuated between the old notion which regards the disease as one primarily of the suprarenal capsules and the later hypothesis promulgated by **Greenhow**, in 1875, that the lesions of the adrenals are secondary to important and far-reaching changes occurring in the sympathetic nerve ganglia.

In an interesting and important article recently contributed to the columns of the *American Journal of the Medical Sciences*, **Dr. W. Gilman Thompson** makes a somewhat vigorous plea in behalf of the latter theory, insisting that in a large percentage of cases of **Addison**'s diseases the adrenals are not even implicated.

The peculiar discoloration of the skin in **Addison**'s disease is not a symptom uniformly present. If it were so, this might lend some support to the view that the adrenals were glands possessing chromogenic powers and that they altered normal hemoglobin, or when diseased formed new pigment, or that they supplied an internal secretion to the blood without which its constituent elements were not held in normal equilibrium. Discoloration is frequently observed in cancer and tuberculosis, and as fully eighty per cent. of cases of **Addison**'s disease originate in primary or secondary tuberculosis, it must be admitted from the clinical side of the question, as it is from the experimental side, that the chromogenic function is not necessarily deranged, even should such a function pertain to these organs.

Dr. Thompson has collated a large number of cases, which appear to justify some of his conclusions, though by no means removing the etiology of this disease from the realms of speculation. A consideration of the symptoms commonly presented, emesis, diarrhea, hyperthrophied spleen, alterations in the structure of liver and kidneys, sensibility of the celiac ganglion, and small compressible or feeble pulse, suggests that **Addison**'s disease is a condition due to irritation of the abdominal plexuses through lesion of themselves, their ganglia or diseased suprarenal capsules. The lesion of the sympathetic may not necessarily be actual but may be reflex, conveyed from the adrenals.

The hypothesis that this disease is one primarily of the nervous system rather than a disease of the adrenals, and that the symptoms are those of sympathetic disturbance rather than of adrenal toxemia, or some blood disease, is one that seems to have a preponderance of evidence in its favor. The question is, however, still within debatable limits, and considerable elucidation from clinical and experimental stand-points is needed to lift it out of its present ambiguous and uncertain state.

EDITORIAL BREVITIES.

THE TREATMENT OF ENLARGED PROSTATE.

ANY contribution to the therapeutics of this distressing malady of advanced life is to be welcomed. The fact that castration in early life prevents the full development of the gland, and in adult life causes atrophy of the gland, seems to be well established. This has suggested castration as a remedy. A case quoted in the *British Medical Journal*, by MR. REGINALD HARRISON, in which division of the vas deferens led to an apparently good result, seems to support this idea. Seeing, however, that prostatic enlargement always occurs at a time of life when testicular activity is fading, the consideration of the difficulty as a reflex, originating in the testicle, is open to some objection. Division of the vasa, however, is an operation that will doubtless be put on trial.

A PROLONGED FAST.

A GOOD deal of uncertainty has been felt as to just how long the human frame can subsist without food. An example of what can be tolerated in this direction, provided no expenditure of energy occur, is afforded in a case recently reported in the Russian medical journals. A young girl seventeen years of age was overtaken by darkness in the village of Ruzino. She decided to sleep under some straw which was lying against a shed. Snow fell and in the morning she was unable to move. On the first day of her imprisonment she ate five pieces of bread she had with her; after this she had nothing. She was discovered fifty-one days later. She was extremely exhausted but conscious, and her recovery proceeded without interruption, when taken to the hospital, under a diet of milk, wine, broth, and oatmeal. The case is interesting, as showing that a fifty days' fast is not of necessity fatal in its consequences.

THE PAN-AMERICANS IN DETROIT.

THE foreign representatives to the Pan-American congress were entertained in Detroit, where they remained two days while en route to Chicago. They were "shown the city," entertained by the various pharmaceutical firms, and given an excursion across Lake Saint Claire, where they were surprised by an entirely unimprovised shipwreck. A banquet was one of the features, and in response to DR. MACLEAN's seductive promptings, the Spaniards' tongues grew glib and eloquent in their praise of our fraternal hospitality and feeling.

MEDICAL NEWS.

LOUISVILLE homeopaths have started a medical school in that city.

PRINCETON, New Jersey, has taken steps to establish a medical school.

CADILLAC has been the scene of an alarming outbreak of scarlet fever.

THE Johns Hopkins medical school opened on October 5, with a class of sixteen, of whom three are women. All the matriculates possess a literary degree.

THE medical department of the United States army has fifteen vacancies.

THERE are one thousand one hundred and nineteen medical journals published throughout the world.

DR. WILLIAM F. HUTCHINSON, a prominent surgeon of Rhode Island, died at Providence on the 2d instant.

HARVARD medical school has a freshman class of about ninety, twenty below the entering class of last year.

BAY CITY is a fertile field for diphtheria, over forty cases having been reported as existing there at one time recently.

M. DE NANSOUTY estimates that fifteen grains of Paris street dust contain about one hundred and thirty thousand bacteria.

SUCCESSFUL photographs of the various forms of waves as they occur in water have recently been produced by M. Marey.

THE annual meeting of the Southern surgical and gynecological association will be held in New Orleans on November 14, 15, and 16.

THE next meeting of the Indian Territory medical association will be held at Muskogee, on Thursday and Friday, December 14 and 15.

A NEW HAVEN woman is reported to have eaten eighteen ears of corn on a wager. No ill effect is mentioned as a sequela of this gastronomic feat.

DR. J. F. ROBINSON, of Windsor, Missouri, has succeeded Dr. James Gordon, as superintendent of the insane asylum, number three, at Nevada, Missouri.

MILWAUKEE has a medical college. The Wisconsin college of physicians and surgeons was opened in that city September 26. A class of forty had matriculated.

ALLIGATORINE is the latest homeopathic remedy, made from the fat of the alligator. This is on a par with recent therapeutics on our own side of the house.

DR. S. FLEET SPEIR, of Brooklyn, has recovered ten thousand dollars indemnity and costs in a suit for damages to his residence by fireworks during a political demonstration.

IN a house-to-house inspection, embracing thirty-four thousand three hundred and sixty houses in the city of Detroit, six thousand and fifty-seven were reported defective.

DR. P. O. HOOPER has resigned the superintendency of the Arkansas state insane asylum, October 1 marking the termination of his official connection. The doctor held the position eight years.

THE New York state association of railway surgeons will hold its third annual meeting in New York City, November 15, under the presidency of Dr. George Chaffee. The profession is cordially invited to attend.

WE congratulate Dr. Charles H. Stowell, of Washington, upon his accession to the editorial tripod of *Food*, a publication devoted to hygiene and nutrition, emanating trom New York City. The doctor is a successful journalist, and the Clover publishing company made a judicious move in capturing him.

DR. E. B. EGGLESTON, of Cleveland, and Dr. M. P. Hunt, of Delaware, Ohio, are the newly elected members of the homeopathic school of the university of Michigan. There are about thirty students in the department.

THE time of holding the meeting of the American medical association is likely to be changed from the first Tuesday in May to the third Tuesday in May. The general committee has been asked to make the change.

DETROIT realized one thousand three hundred and fifty-five dollars and eighteen cents on its garbage during September. Three million three hundred and eighty-nine thousand nine hundred and fifty-nine pounds were collected.

PROFESSOR VON HELMHOLTZ, of Berlin, who has been visiting this country, was tendered a reception at Columbia college, on the 3d instant, by President and Mrs. Seth Low. The Century club entertained him on the 4th. This gentleman invented the ophthalmoscope in 1851.

THE care of dependent and delinquent children will be considered at a conference to be held in the state of New York under the auspices of the state charities aid association. It will be in session in the assembly hall of the united charities building, New York City, November 14, 15, and 16.

PROFESSOR UFFELMAN, of Rostock, has demonstrated that cholera bacilli will survive for twenty-three and one-half hours in a sealed envelope that has been transmitted through the mails. Bacilli retain their virulence on a postal card for twenty hours, but yield up the ghost in rapid succession when consigned to coin.

A NOVEL surgical operation is under consideration in New York. It is no less than the grafting of an arm. Governor Flower will pardon some liberty-loving criminal on condition that he yield up an arm to a reputable citizen who had the misfortune to lose this member in an accident, and Dr. Hunter McGuire will perform the operation.

AT the recent annual meeting of the Wayne county medical society the following officers were elected for the ensuing year: President, Dr. Hal. C. Wyman; vice-president, Dr. E. B. Smith; secretary, Dr. R. H. Honner; treasurer, Dr. C. Henri Leonard. Board of directors: Dr. J. E. Clark, Dr. E. W. Jenks, Dr. James Newell, Dr. J. E. Westgate, Dr. R. Gunsolus.

THE board of health and the city council of Columbus, Georgia, have been engaged in a wrangle. The council refused to pass an ordinance of quarantine against Brunswick, and as a result four of the six members of the board, including the president, have resigned. Many new cases of yellow fever are reported from Brunswick, and the ratio of deaths to cases is about one to seven.

THE American orthopedic association held its seventh annual meeting in Saint Louis, Missouri, on September 19, 20 and 21. The meeting was a successful one, many papers having been read and discussed. The following were elected officers for the ensuing year: President, Dr. A. M. Phelps, of New York; first vice-president, Dr. H. A. Wilson, of Philadelphia; second vice-president, Dr. B. M. Sherman, of San Francisco; secretary, Dr. John Ridlon, of Chicago; treasurer, Dr. E. G. Brackett, of Boston. The next meeting will take place in Washington.

The production of atmospheric air by synthesis was recently demonstrated by Professor Dewar. Fluid nitrogen and fluid oxygen were mixed together in the proportion of four to one, and when they returned to the gaseous state the combination resulted in the generation of atmospheric air. This chemical procedure was unknown before Dewar.

From May 1 to September 16, there were thirteen thousand seven hundred and sixty-five patients treated at the World's Fair emergency hospital. This department of the fair is under the direction of Dr. John E. Owens, who has in charge a staff of six assistant physicians and surgeons, a superintendent of ambulances, and eleven trained nurses.

Between 1835 and 1883 the average number of deaths caused by lightning in France was one hundred annually. The number killed during the years of this period is quite variable, as, for instance, in 1843 there were only forty-eight victims, while in 1874 the death roll registered one hundred and seventy-eight. About five times as many were injured by lightning, on an average, as were killed.

Chloroform is responsible for another death. It was administered at the Seney hospital in Brooklyn, and the patient was a male, aged fifty-five, who had a dislocation of the shoulder. The house-surgeon strongly objected to the employment of an anesthetic but the patient overruled the objection, and as a result suddenly expired with cardiac paralysis after a few whifs of the vapor had been indulged.

Detroit Medical and Library Association.—The annual meeting was held October 2. The following officers were elected to serve for the ensuing year: President, Dr. J. Flintermann; vice-president, Dr. E. T. Tappey; treasurer, Dr. A. P. Biddle; secretary, Dr. P. M. Hickey. The retiring president, Dr. F. W. Mann, delivered a brief address on matters concerning the future of the association.

Tobacco is to be rendered hygienic by removing the sting—nicotine. The method contemplates manipulating the crude product with oils and other substances. Smoking will then assume a more congenial phase. The disgusting pipe will likely be relegated to the shelf, and many shattered constitutions will rejoice over their rescue from the deleterious effects of the noxious principle just in the nicotine.

The sanitary expert of Detroit visited thirty-three public schools during September and found the scholars breathing sewer gas in twenty-two of them. He found eighteen of the schools overcrowded, one hundred and sixteen of the rooms having more pupils than their capacity. The excess of pupils amounts to eight hundred and fifty-five. He also found five defective flues, and one playground too small.

The Detroit Gynecological Society.—The annual meeting was held October 11. Dr. J. H. Carstens, the retiring president, entertained the members and several invited guests at a sumptuous banquet. The dinner was followed by witty and eloquent speeches. Dr. C. A. Devendorf, is to fulfill the presidential duties of the coming year. Dr. W. J. Cree, is vice-president, and Dr. R. A. Newman, secretary.

THE French government has commissioned Father Sauton, a Benedictine monk, trained in medicine, to visit the leprous districts of Norway, Lapland, Finland, Turkey, Asia Minor, Greece, and Egypt, for the purpose of obtaining information relative to the history of this disease and thereafter to render a report to M. Pasteur in the hope that the latter may be able to devise measures for its successful treatment and final extermination.

THE oldest American resident in China—Dr. Daniel J. MacGowan, of Wenchow—is dead, aged seventy-eight years. He was the son of North of Ireland immigrants, and a native of Massachusetts. He graduated from the college of Physicians and Surgeons, of New York, class of 1840. About fifty years ago he engaged as a pioneer medical missionary, and later accepted a position as medical officer to the British customs service at Wenchow.

DR. THOMAS HOOVER, a member of the Ohio state board of health, is the father of a plan to improve the water supply in that commonwealth. It contemplates the state charge of the supply, the construction of a system of canals to be fed by Lake Erie, and the conveying of these artificial water courses along the line of all important cities and towns. The pure water problem is receiving the attention of the board just now, and this method will be considered.

DR LUTHER S. HARVEY, food inspector of Detroit, reports having made one thousand two hundred and thirty-four inspections and investigated nine complaints during September. He had condemned and confiscated three hundred and twenty-six barrels of fruit as unfit for food, of which one hundred and twenty-seven were peaches and one hundred and twenty-five pears. He notes a marked improvement in the quality of fruits and vegetables offered for sale.

DR. EDWIN N. COLT, of Brooklyn, died on the 15th of September, in the eighty-third year of his age. He was a graduate of the Berkshire medical school, and had been in active practice sixty years. At the age of twenty-two he located at Williamsburgh, a village on Long Island having about five hundred inhabitants, but which is now a part of the city of Brooklyn. Two years since he was tendered a banquet in honor of his eightieth birthday and long-continued professional career.

A PERNICIOUS practice has been in vogue in the public schools of Saint Paul, Minnesota, which has had a quietus put upon it by Health Commissioner Hoyt. A duty of the several janitors involved the collection of all lead and slate pencils after school hours and the indiscriminate distribution of them in the morning. By a ruling of Dr. Hoyt each pupil will hereafter retain his own pencils, as it is believed that disease has resulted among the children from promiscuously inserting these articles in their oral apertures.

DR. A. M. FERNANDEZ YBARRA read a paper before the Pan-American medical congress on "The Part Taken by the Medical Profession in the Discovery of America," in which he stated that two physicians accompanied Columbus on his first voyage to the new world. One, named Maestre Alonso, was on board the Niña, and the other, Maestre Juan, on the Pinta. The former of these devoted physicians was one of the thirty-eight men whom Columbus left in the fortress "La Navidad," where they were massacred by the native Indians before the second coming of the great discoverer.

THE crippling and disfiguring of children for purposes of begging is the horrible trade engaged in by a gang of men at Biskupitz, Austria. A house was recently discovered which contained several unfortunate little ones with their arms and legs broken and bound in positions to insure deformity. It is said that one young girl had both eyes gouged out. The subjects are kidnaped and after they have undergone the crippling process they are sold to persons who compel them to serve in the capacity of beggars.

DR. T. H. PARKE, the distinguished Irish surgeon who accompanied Stanley on his trip across Africa, died on Sunday, the 17th ultimo, aged thirty-six years. He was born at Drunmona, Tyrone county, Ireland, received his commission as surgeon in the medical staff of the British army in 1881, and served the Stanley expedition during 1887–88–89. The great explorer expresses his high esteem for the soldierly surgeon in this ante-mortem epitaph: "His devotion was as perfect as human nature is capable of rendering."

THE DEATH OF CHARLES CLAY.—The death is announced in the British journals of Charles Clay, known on the other side of the Atlantic as the "father of ovariotomy." "Clay, of Manchester," as he was usually called, performed his first ovariotomy in September 1842, and for fifteen years was almost the only operator. In 1845 he removed a fibroid uterus by abdominal incision, anticipating Koeberlé by eighteen years. He retired from practice several years ago, and his death closes a career, in many respects, historic.

THE board of medical examiners of the state of Washington have abolished the practice of issuing temporary licenses to physicians pending examination at the succeeding regular meeting of the board. It has been discovered that the documents are illegal, and that the board has no authority to issue permits to any physician who has not passed the required examination. Meetings are held the first Monday in January and July, and the secretary of the board, Dr. Howard Keylor, of Walla Walla, may be addressed for particulars.

THE Naval post-graduate school at Brooklyn, the new school of instruction for surgeons at the naval laboratory at Brooklyn, will be in charge of the following officers: Medical Director J. H. Clark, president; Medical Inspector C. H. White, and Surgeons J. L. Neilson and M. F. Gates. Chemistry, hygiene, microscopy, bacteriology, ventilation, life-saving, anthropology, and bedside work will constitute the curriculum. The course of instruction will continue about three months. The school opened in August with a class of two scholars.

THE regulation of midwifery is strongly advocated in the following resolution which was adopted by the section on obstetrics of the Pan-American medical congress: *Resolved*, That the section on obstetrics of the Pan-American medical congress protests against the irregular practice of obstetrics by midwives, and in view of the danger to the community incident thereto, recommends that the boards of health or licensing boards of the various states refuse to grant licenses to applicants to practice midwifery who have not received technical instruction and preliminary training after at least one year in medical schools and passed an examination in obstetrics equal to that required of the applicant for the degree of medicine. *Resolved*, That copies of these resolutions be sent to licensing boards or boards of health of the several states.

MICHIGAN has between six hundred and seven hundred feeble-minded and epileptic subjects who are in waiting for the opening of the new state home which is to be erected in the spring. An appropriation of fifty thousand dollars has been made for the purpose, and the cottage plan will be adopted. It is the desire of the commission to so locate the site that a large acreage adjoining can be purchased at reasonable rates, the idea being to make the institution as near self-supporting as possible by having the inmates work on the farm.

DR. EDWARD WARREN recently died in Paris. He was born in Edenton, North Carolina, in 1828, and was the subject of a career marked with interesting events. He was acting surgeon-general in Lee's army during the Peninsula campaign, and after the war he went abroad and became surgeon-general in the Khedive's army in Egypt, and was honored with the title of bey. The great French physician, Charcot, induced him to settle in Paris, and there Dr. Warren had a large practice among distinguished people and received the cross of the legion of honor.

DR. DUNCAN MCLEOD, health officer of Detroit, reported twenty-one cases of diphtheria and thirty-one of scarlet fever, a total of sixty, with nine deaths, during September. During September, 1892, there were one hundred and forty-six cases of scarlet fever and diphtheria, and although the house-to-house inspectors insisted that the credit for the reduction belonged to them, Dr. McLeod is of the opinion that it was due principally to better quarantining. The quarantining bill for the month amounted to one hundred and seventy-nine dollars and eighty-nine cents, a considerable reduction over the previous month.

THE Canadian medical association held its twenty-sixth annual meeting in London on the 20th and 21st ultimo. The following will serve in official capacity for the ensuing year: President, Dr. Harrison, of Selkirk, Ontario; secretary, Dr. F. H. G. Starr, of Toronto; treasurer, Dr. Small, of Ottawa. Vice-presidents: Ontario—Dr. F. R. Eccles, of London; Quebec—Dr. Stewart, of Montreal; New Brunswick—Dr. Christie, of Saint John; Nova Scotia—Dr. Muir, of Truro; Manitoba—Dr. Spence, of Brandon; Northwest Territories—Dr. Newburn, of Lethbridge; Prince Edwards Island—Dr. Taylor, of Charlottetown; British Columbia—Dr. McKechnie, of Nanaimo. A secretary for each of these provinces was also elected. The next meeting will be held at Saint John, New Brunswick.

MEDICAL STATISTICS OF THE STATE OF NEW YORK.—The present population of the state is estimated at six millions. The estimated number of physicians in the state is ten thousand, or one physician for every six hundred inhabitants. Of the ten thousand physicians, eight thousand belong to the regular schools; one thousand three hundred are homeopathic practitioners; four hundred are eclectics; and the remaining three hundred represent all other methods of practice. There are nine regular medical schools in the state, of which two are located in Buffalo, one in Syracuse, one in Albany, one in Brooklyn, and four in New York City. The students attending upon these schools during the last year numbered two thousand and ninety-six—one hundred and twenty-eight in Buffalo, fifty-eight in Syracuse, one hundred and seventy in Albany, two hundred and one in Brooklyn, and one thousand five hundred and thirty-nine in New York City. There are two post-graduate schools in New York City with an aggregate attendance of eight hundred and nineteen during the past year.

THE Medical society of the Missouri valley held its annual meeting at Council Bluffs, Iowa, on Thursday, September 21, under the presidency of Dr. J. M. Knott, of Sioux City. This organization now has three hundred and sixty-five members. The next meeting will be held at Omaha. The following were elected officers for the ensuing year: President, Dr. A. F. Jonas, of Omaha, Nebraska; first vice-president, Dr. A. L. Wright, of Carroll, Iowa; second vice-president, Dr. Daniel Morton, of Saint Joseph, Missouri; treasurer, Dr. T. B. Lacy, of Council Bluffs, Iowa; secretary, Dr. F. S. Thomas, of Council Cluffs, Iowa.

THE Mississippi valley medical association, at its recent meeting in Indianapolis, elected the following officers for the ensuing year: President, Dr. X. C. Scott, of Cleveland; first vice-president, Dr. Leon Strauss, of Saint Louis; second vice-president, Dr. G. Frank Lydston, of Chicago; secretary, Dr. Frederick C. Woodburn, of Indianapolis; treasurer, Dr. George J. Cook, of Indianapolis. The attendance was remarkably small. The papers, while not having been subjected to the boiling-down process, were excellent, and elicited animated discussion. The next meeting will be held at Hot Springs, Arkansas, the first Tuesday in November of next year.

DR. E. O. SHAKESPEARE, of Philadelphia, presented the following resolution in the section on hygiene, quarantine, et cetera, of the Pan-American medical congress, but it was considered adversely by the International executive committee to whom it was referred: *Resolved*, That it is the sense of this section that in view of the prevalence of Asiatic cholera in Europe at the present time, and the constantly increasing number of foci of infection, immigration from European countries in which cholera exists should be temporarily suspended, as this action affords, in our opinion, the only certain means of averting a threatened invasion by the disease of countries of the American continent.

THE AMICK CURE.—Dr. James E. Reeves, of Chattanooga, Tennessee, says the *Medical News*, has been arrested on a warrant sworn out by Dr. Amick's representative, on the charge of sending defamatory matter through the mails, and is bound over to court under bond of one thousand dollars. Dr. Reeves says he is not in the least disturbed and that he shall go on with his exposures "though there may be as many devils in the way as there are tiles on the houses of Chattanooga." "I welcome the opportunity to expose the whole thing and make a Waterloo of it. I have twenty-one letters, from people whose names appear in the Amick pamphlet, showing the cure to be worthless."

DENVER has four hundred doctors in a population of about one hundred and twenty thousand—one to every three hundred persons. Twenty-five per cent of the people living in that city went there because of consumption in themselves or members of their families. The number of cases of cured or retarded consumption is said to be enormous. Ten physicians now pursuing their profession in Denver belong in this category. Of the diseases that prevail there tuberculosis is the more common, the major number of patients going thither from other sections of the country in the hope of obtaining relief. Typhoid fever, acute rheumatism, and diarrheal diseases of children are rare. Diphtheria and scarlet fever, while slightly less prevalent than in other localities, are decidedly less fatal. Acute surgical cases are remarkably infrequent—gun-shot and stab wounds excepted.

THE number of beds in the hospitals of different cities in the United States is as follows: New York, eleven thousand; Philadelphia, six thousand three hundred and ninety-one; Chicago, four thousand six hundred and eighty-four; Cincinnati, three thousand; Saint Louis, two thousand and eighty-six; Brooklyn, two thousand; Buffalo, one thousand and twenty-five; Denver, nine hundred and sixty-one; Saint Joseph, eight hundred and forty-nine; Detroit, seven hundred and sixty-two; Milwaukee, six hundred and sixty-seven; Omaha, six hundred and seventeen; Saint Paul, five hundred and twenty-two; Kansas City, five hundred and sixteen; Minneapolis, three hundred and twenty-five.

THE LOCAL MEDICAL JOURNAL.—The late editor of the *Journal of the American Medical Association*, Dr. J. C. Culbertson, thus speaks of the local medical journal: "Always first is the local journal. This publication is and should be a little closer in the affections of every doctor than any other, and should have his practical good will and generous support. This support should extend to contributions to its pages, and which may be very brief; but it should be the bounden duty of every one to at least once a year make his offering in this channel. There should never be a debit side in the subscription list of the local journal, for there is never a time when the local journalist is not doing more for his profession than it is doing for him."

THE abolition of the bible from courts of justice is a matter that should be strenuously advocated by all who believe in the germ theory of disease. The dangerous practice of kissing the book was recently declined by a London physician, and his action occasioned considerable newspaper comment. The *Pall Mall Gazette* published the following account of the affair: "Kissing the book is likely before long to become one of the lost arts. Another objector to the practice has turned up in the West London police court in the person of Dr. Morris Wallace, called to give evidence in a case where one woman was charged with stabbing another in the eye with a fork. The doctor said he had no religious scruples, but he considered that there was a risk to health involved in putting to his lips a book which had already been kissed by other people. The magistrate suggested as a compromise kissing the inside of the volume. But here, too, the doctor objected, on sanitary grounds, and he was finally sworn by holding up the right hand."

CLEVELAND has five hundred and twenty-seven physicians. One hundred and thirty-nine of these are homeopaths. This is a percentage of twenty-six, the largest homeopathic ratio contained in any city in the United States. New York, with three thousand four hundred physicians, shows a percentage of less than ten. Chicago has three hundred and forty-eight homeopaths out of a total of two thousand and seven hundred—twelve per cent. Philadelphia, three hundred and forty-six out of a total of two thousand three hundred and eighty—fourteen per cent. Detroit, fifty-nine out of a total of four hundred and eighty-two—twelve per cent. Pittsburgh, fifty-four out of three hundred and eighty-three—fourteen per cent. Minneapolis, forty-six out of three hundred and twenty-eight—fourteen per cent. Saint Paul, twenty-six out of two hundred—thirteen per cent. Allegheny, seventeen out of one hundred and fifty-six—less than eleven per cent. In Cincinnati, Indianapolis and Columbus the percentage is about six. Verily, Cleveland is the hotbed of homeopathy!

A Philadelphia woman recently gave birth to a baby boy decorated with a caul. The mother was delighted on learning that her offspring was the bearer of this omen of good luck, and the women of the neighborhood were not slow in tendering their congratulations. But this great joy was of short duration, for some ill-fated person had resolved to procure the caul and it soon disappeared. A nurse and neighbor were believed to be the guilty parties, the enraged mother going so far as to assert that the former disposed of it to a sea captain for fifty dollars. The nurse was arraigned, and by way of defense declared that the household cat appropriated the coveted article while it was lying in state on the bureau. The court received this story with some incredulity and confessed itself in a quandry as to what disposition to make of the matter, but finally decided to hold the testimony under advisement, and in consequence thereof the case is still on caul.

The state board of health, at a meeting held in Lansing on the 30th ultimo, declared consumption a disease dangerous to the public health, and, by adopting the following resolution, placed it in the category of communicable diseases: *Resolved*, That hereafter, consumption (and other diseases due to the *bacillus tuberculosis*) shall be included in the official list of "diseases dangerous to the public health," referred to in sections 1675 and 1676, Howell's statutes, requiring notice by householders and physicians to the local health officer, as soon as such a disease is recognized. The secretary of the board, Dr. Henry B. Baker, says that in this resolution the question of isolation of the patient is not contemplated. Its purpose is to secure to the local health authorities and to the state board of health information of the location of each case of this most dangerous disease, with the view of placing in the hands of the patient reliable information how to avoid giving the disease to others, and in the hands of those most endangered information how to avoid contracting this disease.

RECENT PUBLICATIONS.

REVIEWS.

MANUAL OF MEDICAL TREATMENT OR CLINICAL THERAPEUTICS.*

Dr. Yeo's reputation as a teacher and author will make his manual of medical treatment sought after by practitioners and students. As a hand-book of therapeutics the schema of the work is a correct one. The therapeutics of disease are not approached from the stand-point of the drug, but from that of the disease itself. In this way the author has made an exceedingly interesting manual, which, for all practical purposes, is a hand-book of medicine.

In the volumes before us the diseases are considered seriatim and the therapeutical indications based upon pathological states and conditions are pointed out. The subject matter appears to have been thoroughly revised up to date, and all recent therapeutical suggestions of any moment are included.

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* By I. Burney Yeo, M. D., F. R. C. P., professor of therapeutics in King's college, London. In two 12mo volumes containing twelve hundred and seventy-five pages, with illustrations. Complete work, cloth, $5.50. Philadelphia: Lea Brothers & Company, 1893.

REACTIONS: A SELECTION OF ORGANIC CHEMICAL PREPARATIONS IMPORTANT TO PHARMACY IN REGARD TO THEIR BEHAVIOR TO COMMONLY USED REAGENTS.*

A TRANSLATION of Flückiger's Reactions, or rather an adaptation of them suitable to the needs of the American chemist, will be received gratefully by pharmacists. The translation has been made by Dr. Nagelvoort, of the laboratory of Messrs. Parke, Davis & Company, of this city. The book is one that will readily find a place for itself in the libraries of all chemists, as it will be essential in all future analytical and toxicological work.

The author is to be congratulated in finding such an efficient translator, and the translator upon having his volume published in such a handsome and attractive form.

* By F. A. Flückiger, Ph. D., M. D. Authorized English edition. Translated, revised and enlarged by J. B. Nagelvoort, analytical chemist to the pharmaco-chemical laboratory of Parke, Davis & Company. Price, $2.00. George S. Davis, Detroit.

REFERENCES.

LITERARY MENTION.

"DUNGLISON'S NEW PRONOUNCING MEDICAL DICTIONARY."—A new edition of "Dunglison's Medical Dictionary" is announced as in press for early publication. It has been thoroughly revised and greatly enlarged, and will contain about forty-four thousand new medical words and phrases. Pronunciation has been introduced into the new edition by means of a simple phonetic spelling. This work has always been noted for the fullness of its definitions, ample explanation being its distinguishing characteristic. In the new edition much encyclopedic information, difficult of access elsewhere, will be found conveniently at hand. Especial attention has been devoted to matters of practical value. A review will appear in an early issue.

"GRAY'S ANATOMY"—NEW THIRTEENTH EDITION.—Another edition, the thirteenth, of this standard work is announced for early publication by Messrs. Lea Brothers & Company. It is hardly too much to say that this work has been the most popular of all medical text-books since it first made its appearance in 1851. Its text has been revised successively by the foremost anatomists of a generation, and the present edition embodies whatever changes were necessary to make it represent its advancing science. The illustrations have always been noted for their clearness. Their large size has rendered it possible to print the names of the parts directly upon them, thereby indicating not only their names, but also their extent—a most important matter. A liberal use of colors has been made to secure additional prominence for certain parts. Notwithstanding these improvements, the constantly increasing demand has justified a reduction in the price of the colored edition. An early review will appear in the journal.

"A NEW MEDICAL DICTIONARY."—A completely new medical dictionary is announced for early publication by Lea Brothers & Company. The author, Dr. Alexander Duane, of New York, is already widely known as the medical expert for "Webster's International Dictionary." His new work has been drafted to supply medical students with all desired information concerning the words they will meet in their course of reading, and as the vocabulary has been selected most liberally, the work will be of value to practitioners also. The pronunciation of each word is given by a simple and obvious phonetic spelling; then follows the derivation, an unexcelled aid to memory, and finally a full definition. Descriptive matter has been appended to such words as cannot be adequately explained by simple difinition. Thus diseases are described, and their symptoms and treatment are given; drugs are followed by their properties, effects, doses, et cetera. Extensive tables of bacteria, doses, et cetera, are placed in the alphabet most conveniently for reference. A work of real value is promised, and we shall take an early opportunity of reviewing it in the journal.

MEDICAL PROGRESS.

MEDICINE.

CONCERNING THE INCUBATION PERIOD OF THE INFECTIVE FEVERS.

The period of incubation of the various infective fevers has been a matter of great discussion, and one concerning which definite conclusions have not been reached. A report on this subject by a committee of the London clinical society will be received with much interest.

The material which the report contains was obtained in response to a circular letter issued in 1889 by a committee over which Dr. Broadbent presided. The large mass of documents received was digested by Dr. Dawson Williams, one of the honorary secretaries of the committee. Dr. Williams was at the pains to go through the whole of the reports made by its medical inspectors to the medical department of the local government board since 1878, which had been laid open to the inspection of the committee by Sir George Buchanan, one of its members. Many important facts and observations in respect especially to diphtheria, typhoid fever, and scarlet fever, were thus obtained.

The system upon which the summaries were prepared has been to take first those cases in which the exposure to the source of infection was for a short time —a few minutes or hours—at a known date. These have been made "the basis of the conclusions drawn as to the duration of incubation; while other histories, in which only the date of the commencement or cessation of exposure to a source of infection was given, have been used for contributory evidence." The duration of infectiousness is also investigated by the light of the data supplied; and the length of time which a patient who has suffered from the disease should be isolated, the period during which a susceptible person exposed to infection should be quarantined, the liability to the retention of infection in clothes and to its dissemination by milk and water, are also considered.

The conclusions of a committee which has evidently gone over the subject so carefully are of much importance, and deserve to be presented here.

Diphtheria, two to seven days; oftenest two.

Typhoid fever, eight to fourteen days; sometimes twenty-three.

Influenza, one to four days; oftenest three to four.

Measles, seven to eighteen days; oftenest fourteen.

Mumps, two to three weeks; oftenest three weeks.

Rubeola, two to three weeks.

Scarlet fever, one to seven days; oftenest two to four.

Small pox, nine to fifteen days; oftenest twelve.

Further investigations were made with regard to the time and duration of the infective period.

Diphtheria was found to be infective during the period of incubation, attacks and convalescence.

Mumps and rubeola are also infective for three or four days before the onset of the parotiditis and appearance of the rash.

The contagiousness of measles speedily disappears, and does not continue in disinfected persons for over three weeks.

Typhoid fever is infectious from the time of onset until two weeks after the fever has gone and convalescence set in.

As is well known, the contagiousness of scarlet fever varies greatly, but is generally continued a very long time—certainly until desquamation ceases, and sometimes as long as eight weeks.

The figures put forth by the committee of the clinical society will doubtless excite some discussion and controversy, but they are based on a large amount of clinical data.—*New York Medical Record.*

A CASE OF HOMICIDAL MANIA.

PHYSICIANS are often called upon to listen to strange, humorous, pathetic, or horrible stories; but seldom has it been my lot to hear a more frightful one than a patient related to me last night.

He told it so simply and graphically that I can do no better than give it in his own words.

He is a carpenter, of powerful physique, while his wife is a delicate, slender woman. The events occurred about three years ago and are strictly true, and illustrate to a remarkable degree the wonderful cunning of some insane patients. He said:

"My wife had often acted strange before, but had never attempted violence, so I was totally unprepared for what happened. We had retired as usual, when between 11 and 12 P. M. I was suddenly aroused from sound slumber by violent and repeated blows on the head.

"Frightened, confused, bleeding, I sprang from my bed, and in that hideous darkness I grappled with my unknown assailant. We had a fearful struggle for the mastery, when at last I wrenched a stout club from my opponent's hands and was about to use it with all my force, when my wife laughed and said in her usual tone of voice, 'Ben, I had to do it.'

"Until she spoke I had no doubt but that I was assailed by a burglar or a midnight assassin. On lighting the lamp I found the club was a heavy hickory mallet-handle.

"A physician was called who treated my wounds, though I will bear long scars to my grave.

"Nothing new happened during the rest of the night, and the next night she went to bed as usual, while I kept watch. My head pained so that I could not sleep, and anyway I dared not sleep.

"Early the next night she said, 'I want a drink,' and when I volunteered to get it for her, she savagely told me 'to mind my own business, she would get it herself.' I said, 'All right, suit yourself,' for I made it a point never to cross her, except when absolutely necessary, and then to be firm and unyielding.

"She arose, went to the water-pail in the next room, in plain sight of me, stood there rigidly for a brief time, and then suddenly went out of sight into the pantry. I at once arose to follow, when she laughed and returned to bed. Wondering what her object could be in going to the pantry, I determined to investigate when she went to sleep. Soon she became quiet, her breathing deep and regular, so I feigned sleep by nodding in my chair, closing my eyes, and allowing my paper to fall to the floor. Through my half-closed eyes I watched her; she soon half arose, her eyes gleaming like a snake's, and eyed me intently. When I aroused she dropped back in bed in her former position so quietly and suddenly that I doubted my senses as to whether she had ever stirred. After a while, feeling sure she was asleep, I went out through the kitchen into the pantry, and my blood ran cold when I found two large butcher knives laid out for me. Returning to see if she still slept, I found her apparently as I left her, so I went again to the pantry and took the knives out of doors and threw them away in the grass.

"All this time I heard no sound, and it was impossible for her to see me from the bed or the room where she was.

"Her brother soon came, and as she still slept and I was very tired and in great pain, I arranged for him to watch her, cautioning him not to close his eyes for one instant. I then went upstairs, but the floor had settled so I could not quite shut the door. I dared not go to sleep with an unlocked door, so I took a large stove zinc and noiselessly placed it against the door in such a position that the door could not be opened without knocking the zinc over and thus arousing me. I slept little, but toward morning I fell into a light sleep, but soon awoke, feeling that some one was climbing the stairs. I listened intently and soon knew she was coming. She approached the door, and though it was opened only two inches (and from the inside, so a person on the outside could not see the zinc at all) her slender hand and arm crowded in, grasped the zinc, and noiselessly removed it. I then said, "What do you want?" She laughed and said she wanted me to "get up for breakfast." She then descended the stairs, and forgot to take the large carving-knife she had carried up to use on me. She had laid it down when opening the door. I found her brother had gone to bed and was sound asleep.

"It was now 4 o'clock, A. M., and quite light. She had had him build the fire and go to bed, while she busied herself getting breakfast. I then went out to secure the knives in the grass. She came to the door, so I pretended to be out to view the beauties of the early morning sky; but she said: "Oh, I brought those knives in an hour ago." This startled me greatly! How did she know those knives were there? The grass was too long to find them by accident. She could not have seen me from her room or bed when I threw them out, and I am sure she remained in bed.

"Then how did she know the zinc was against my bed-room door? I placed it there noiselessly, and it could not be seen from the outside. She was soon adjudged insane and sent to the hospital for the insane.

"I see her often now, and while sane on many points, and often asking me to take her home, she will never promise not to assault me.

"She only says that she cannot bear to have me buried alive, and if she does not kill me I will surely be buried alive."

"Oh, it was a terrible experience, and her first midnight assault was so deadly and hideous that I shudder whenever I think of it."

This experience is worse than many of the terrible things in fiction, but I can personally vouch for every word of it.—Dr. Helm in *New York Medical Record.*

DANCING AND GYMNASTICS.

INSTRUCTORS and students of the physical education of women were quick to see that the various forms of "skirt dancing" which have so taken public fancy had value as gymnastic exercises. Certain modest modifications of this style of rhythmic motion have been introduced into the gymnasiums, and with excellent results. Young people soon get tired of the inanities of wands, wooden dumb-bells, and of mechanical movements to the strumming of an asthmatic piano. The more there is of a dance movement to calisthenics, therefore, the better the exercise is liked and the more useful it becomes. The dancing academy could be made the best of gymnasiums, if it were ever properly ventilated and the pupils were properly dressed and under intelligent control. As this is impossible, the most feasible thing now will be to inoculate our gymnasiums for girls and women with more of the dance movements. Our youth would not only gain strength, agility, gracefulness and health, but would learn to distinguish what is beautiful in dancing movements from that which is coarse and vulgar.

Miss Kate Field, who is observant and sincere, has taken some such position as this in her *Washington*, and pays particular attention to the value of the movements of the trunk as illustrated in the Spanish and Egyptian dances. "The mid-orient," she says, "confines dancing to abdominal gyrations, marvellous as gymnastics and absolutely impossible to women who have ever worn corsets. Such development and control of abdominal muscles as are exhibited by the dancing-girls of Chicago-Cairo would, if possessed by American women, be the salvation of the race. Invalidism would be impossible, and children would be born healthy. Other than as gymnastics the *danse du ventre* has no interest whatever. It has neither grace nor beauty, the dancers are not attractive, and their persisting in wearing French heels denotes incapacity on their part to appreciate the eternal fitness of things. Vulgar men and women who have set up a howl against this performance would do well to look around the American ball-room and dinner-table and discover like food for prurient fancy." —*Medical Record.*

THE USE OF HYPNOTISM AMONG THE INSANE.

ROBERTSON, as the result of experience on patients in the Morningside asylum, concludes that hypnotism has a certain limited sphere of usefulness among the insane. His most satisfactory results have been in some cases of extreme maniacal excitement, without mental confusion or incoherence, in which he has succeeded in putting the patients to sleep, or in inducing them to take hypnotic drugs voluntarily, to which in the waking state, they made the most determined resistance. He finds that a very large proportion of insane patients are refractory, and that, in general, they are more amenable to hypnotism, in proportion as they are sensible and reasonable. He summarizes the indications for its use as follows:

It may be used first as a direct therapeutic agent.

(1) *In Insomnia.* It may succeed in intractable cases where drugs have not succeeded well. Hypnotic sleep, being more closely allied to healthy sleep than is drugged sleep, must be of great service where the brain nutrition is already bad, and the additional effect of depressing drugs is undesirable.

(2) *As a Sedative in Excitement.* It may here be of direct therapeutic value in preventing an outburst of excitement from passing into mania in a brain in a highly unstable condition.

(3) *To dispel Fleeting Delusional States and the Minor Psychoses.* By means of verbal suggestion in the hypnotic state these minor degrees of mental derangement have been removed.

In addition to its direct therapeutic uses hypnotism may be used for purposes of management.

(1) *To Overcome the morbid Resistance of Patients for their own benefit.* Patients often refuse to do what is necessary for their welfare, and by hypnotizing them they can be made to do what is desired. I have instanced the giving of medicine, but many other purposes can be thought of. I have lately induced a patient to take food in the hypnotic state when she had required to be artificially fed for a week.

(2) *As a Substitute for Restraint.* In cases of excitement and violence, instead of mechanical, physical, or chemical restraint, we may use hypnotism, which may be described as a form of mental restraint, either alone or in combination with the last. It is, however, uncertain and not always possible.

As a drawback to its employment, he mentions the possibility of arousing or confirming the delusions of certain classes of patients, which, however, applies equally to the use of electricity for therapeutic or other purposes.—*American Journal of the Medical Sciences.*

A REMARKABLE TRAUMATIC NEUROSIS.

PEL (*Berliner klinische Wochenschrift*, Number XXIV, page 561) has reported the case of a man, twenty-seven years old, who fell a distance of two stories, possibly striking his head. Consciousness was lost and did not return for four hours, when severe headache appeared, referred particularly to the nape of the neck and the occipital region upon the left side. There was neither nausea nor vomiting, nor hemorrhage from the nose or ears, nor involuntary passage of urine or fecal matter. No external lesion could be discovered. The patient remained in

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bed for three days, complaining of left-sided occipital headache, vertigo and drowsiness. Weakness of the right side of the body was also observed. Speech was not interfered with, but standing and walking were performed only with difficulty. On attempting to resume his occupation as a carpenter, after the lapse of four weeks, the man found himself unable to do so on account of headache, vertigo, and a sense of fatigue in the extremities, especially those of the right side. In the course of time vision became impaired, and the other symptoms became aggravated, until, ten months after the accident, the patient was unable to stand or walk. In the recumbent posture, however, he had perfect control of the movements of the lower extremities, but as soon as an attempt was made to place him upon his feet the lower extremities would give way and the patient would fall unless supported. The knee-jerks were exaggerated. The face at the same time became red, and the skin covered with perspiration; the pulse increased in frequency, and the patient appeared as if exhausted. On examination a complete right-sided hemiparesis was found to exist. Common and special sensibility were normal, and there were no muscular or cutaneous trophic changes. The urine presented no abnormality. Upon laryngoscopic examination a polyp was found seated upon the anterior portion of the right vocal band, and which, upon phonation, became incarcerated between the two bands. A high degree of myopia existed, but there was neither choked disk, optic neuritis, limitation of the field of vision, nor disturbance of the color-sense. There was no neurotic or psychotic family history, and no personal history of alcoholic or venereal excess. The diagnosis wavered for a time between functional derangement of the central nervous system—traumatic neurosis and organic disease of the cerebellum—tumor, cyst, abscess. It was determined to remove the polyp in the larynx, and immediately after the operation the man became aphonic. In the course of several weeks there developed right-sided hemianesthesia, hemianalgesia, hemianosmia, hemiamblyopia, and bilateral loss of the sense of taste. A little later all doubt as to the diagnosis was removed by the occurrence of an hystero-epileptic attack, and some time later a second attack. In spite of assiduous treatment the condition of the man underwent little improvement. He was finally attacked with bilateral catarrhal pneumonia, to which he rather unexpectedly succumbed. A careful post-mortem examination failed to disclose any organic change to explain the symptoms present during life.—*American Journal of the Medical Sciences.*

THE BACTERIOLOGIC DIAGNOSIS OF CHOLERA.

THE following is the mode of procedure carried out at the Institute for Infectious Diseases at Berlin in a bacteriologic study of a suspected case of cholera (*Zeitschrift j. Hygiene u. Infectionskrankh.*, 1893, Band. XIV, *Deutsche medicinische Wochenschrift*, 1883, Number XXII, page 528). Cover-glass preparations are first made (the flakes of mucus that are often present in the dejecta being selected) and stained with a dilute carbolized fuchsin solution. If comma bacilli be found, peptone cultures and gelatin plate cultures are made. The peptone medium consists of a sterilized one per cent. watery solution of peptone and of sodium chloride, to which sufficient soda is added to impart a decided alkaline reaction. This is kept at a temperature of 36° centigrade. If cholera bacilli are present in large number, a pure culture will be found on the surface of the peptone solution at the end of six hours; if present in smaller number, the culture will develop more slowly and there will be an admixture of other bacteria. It is best to look for the bacilli in from six to twelve hours after inoculation. If the peptone contain a certain proportion of nitrates, if the sulphuric acid employed be free from nitrous acid, and if the cultures be pure, the cholera-red (indol) reaction will take place. A good ten per cent. gelatin culture-medium is inoculated and kept at a temperature of 22° centigrade. At the end of from fifteen to twenty hours characteristic appearances will have developed. If upon primary microscopic examination cholera bacilli have not been found, agar plates are cast in addition to the inoculation of the peptone solution and the gelatin plates. Six hours after the inoculation of the peptone solution curved bacilli are from time to time looked for; and as soon as found agar plates are cast. The material to be examined is preferably not mixed with liquefied agar; but the sterile agar is permitted to harden in covered dishes and placed for a few days in the thermostat to permit the expressed water to evaporate. The surface of the agar is then inoculated with the suspected material or from the peptone solution and kept at a temperature of 37° for eight or ten hours. If cholera bacilli be present they form colonies of light-yellow, transparent appearance. If few cholera bacilli have been found in the peptone solution and few or no colonies on the gelatin plates, suspicious or doubtful colonies upon the agar plates must be transferred to other agar plates, to peptone solution, and to gelatin plates, so that sufficient material may be obtained for the purpose of the indol reaction and of experiment upon animals. For this last purpose, cultures from the surface of agar plates are to be preferred. With a platinum loop, about one-fifth milligramme of the culture is taken and mixed with one cubic centimetre of sterilized bouillon and injected into the peritoneal cavity of a guinea-pig. This is lethal for a pig weighing from three hundred to three hundred and fifty grammes. The peptone solution may also be employed for the detection of cholera bacilli in water. To about one hundred cubic centimetres of the suspected water are added one per cent. each of peptone and sodium chloride and the mixture is kept at a temperature of 37°. In ten, fifteen and twenty hours agar plates are to be inoculated with this solution. The resulting colonies are further cultivated upon peptone, glycerin, and agar, studied for the indol reaction, and injected to lower animals.—*American Journal of the Medical Sciences.*

SURGERY.

SURGICAL TREATMENT OF CERVICAL, THORACIC AND ABDOMINAL ANEURISM.

As I have interpreted the request of your committee, the task assigned has appeared to me to be rather the discussion of the principles applicable in practice to the treatment of aneurismal disease in the regions concerned, and the presentation of a series of propositions for your discussion, rather than a mass of statistics. The statistical method is especially inapplicable when discussing the treatment of aneurism, because cases presenting the most diverse conditions have been treated by the same methods. Cases where cure could reasonably have been expected, and others where avowedly but temporary benefit, or "euthanasia," was aimed at, have been subjected to the same treatment and grouped together in the same tables, so that the percentages of recovery, failure or death are useless as guides to treatment. Just so soon as we have accurately determined what is the best method theoretically for each condition—mark, not variety of aneurism, as classed in the books—and in practice correctly appreciate the conditions present, will our treatment meet with its proper measure of success; but statistics, as at present constituted, cannot decide these questions. The primary object in all cases must be to prevent further enlargement of the sac, and by such means as shall not in themselves prevent nature's efforts to cure. Whatever will relieve intra-saccular tension or diminish the direct momentum of the blood, will be advantageous. The moment either of these are done, the normal resiliency of the sac and the surrounding tissues tends to diminish the size of the aneurism. If, at the same time, an actual pad be supplied by the gradual deposition of a material which can actively contract, one which, if left under proper conditions for a sufficient length of time, will actually become organized into connective tissue obliterating the aneurism, we have achieved all that art theoretically need do. If permanent closure of the section of artery from which the aneurism springs can also be secured, the ideal has been attained, rendering relapse impossible.

A recapitulation of the chief points of importance concerning the formation of thrombi in the living vessels will render easier of comprehension the rationale of certain surgical methods commonly employed in the treatment of aneurisms. Not only the physical conditions of the blood and sac, but also the vital conditions of the sac-wall and of the sac-contents, mutually contribute to, or interfere with, the deposition of white thrombi. Absolute or preferably partial physical rest of the blood favors thrombosis. These conditions can be secured by complete or partial arrest of the direct blood-current flowing through or by the sac: (1) By lessening the force and frequency of the heart's action; (2) by dilatation of the peripheral capillaries, that is, reducing blood pressure; (3) by physical interruption of direct access of blood to the sac by proximal pressure or ligation; (4) by preventing the blood passing freely out of the sac by distal mechanical obstruction of the artery. All that is effected by proximal arrest of circulation is temporary absolute quietude of blood in the sac; with later—from establishment of the collateral circulation—only that marked dimunition in velocity of the current which is most favorable, as will shortly be explained, to the formation of a thrombus. Experiments have proven that after damage of the vascular walls, moderate slowing of the blood favors the accumulation of white blood cells in the plasmatic current, but that a more marked diminution in the velocity is required to allow the blood plaques to gather in numbers in this peripheral layer, while at the same time the leucocytes relatively diminish. The plaques promptly heap up at the sight of injury, according to Eberth and Schimmelbusch, owing to their rapidly undergoing "viscous metamorphosis." The primary cause of the formation of white thrombi to this accumulation of blood plaques, resulting from slowing or irregularities of current and "viscous change," induced by contact with the intima, damaged by disease or traumatism; or by the presence of foreign substances. The next step is a rapid accumulation of white cells, fibrin ferment is set free and fibrin is formed, so that the completed thrombus contains "plates, leucocytes, fibrin and included red corpuscles."

It is then clear that permanent human white thrombi probably require the conjunction of marked diminution of velocity of the blood with an alteration of the vessel or sac walls to determine the primary accumulation of blood plaques.

The structure of white thrombi, owing to their gradual formation, peculiarly fits them to undergo those subsequent changes which are necessary for their conversion into permanent tissue, and goes far toward justifying the name "active clot," given to them in the past. But is the deposition of laminated white thrombi, however disposed in an aneurism, always advantageous ? Do their presence by their roborant action delay the fatal issue in proportion to their amount, even if no cure can be effected? Decidedly not theoretically, and clinically numerous instances could be quoted in support of this statement. If all portions of the sac are *lined* with clot, which remains in close contact with the wall, unquestionably its resistance will be increased, but if any part of the wall is not coated with clot, the hydrostatic pressure will not be diminished upon that point, and even if not previously weaker than other portions of the sac, yet if the direct blood stream impinged originally upon it, or is now diverted to it, the deposition of clot in other portions of the aneurism will then be absolutely harmful, hastening the yielding at that point; again, if the clot does not remain in absolute contact with the wall of the aneurism, hydrostatic pressure must still continue to operate harmfully. If, on the contrary, the clot diverts the blood current from the weaker to the stronger portions of the sac, or splits up the direct momentum, as it were, by breaking the one stream into many, although no true widespread reinforcing of the sac by layers of fibrin can be demonstrated, the strain is actually so lessened that the same end is attained, that is, lessened distension occurs, and by the same means eddies and still bays are often produced, which favor the commencement of a white thrombosis, *if the wall be in a fit condition to induce the accumulation of blood plaques.* Thus, theoretically, any obstruction effected by a thrombus which favorably diverts the direct blood-momentum from the weaker to the stronger portions of the sac, and splits up the current, will tend to produce a cure, even if the fibrin does not line the interior of the sac, but at the outset is irregularly disposed. This fact is not merely of theoretical interest, but often explains the clinical fact that means utterly inadequate to cause a primary deposit of clot over the entire surface of the sac, and, indeed, of *themselves* to produce any bulk of thrombus, yet initiate conditions which promptly go on to complete consolidation of the aneurism. In other instances large amounts of clot are formed, yet rupture of the sac, instead of being retarded, is unquestionably hastened. The prime difficulty at present resides in the uncertainty experienced in applying these facts in practice.

Considering the question of treatment the first point to be considered is, "What is meant by the word cure?" Let us examine the conditions found in cases alleged to have been cured. In some, the sac contains much clot, varying in amount from partial or complete lining of its inner surface with a thin or thick layer up to entire obliteration of all cavity; the thrombus may or may not be in close contact with the wall of the aneurism, but whatever its relation may be, it is not structurally continuous with the wall, and is not itself converted into connective tissue. At any time blood may insinuate itself between the thrombus and the sac, terminating in a relapse. Can such a condition be considered a true cure? especially in view of the fact that relapses long after apparent cure do thus occur? While such a condition often does lead to genuine cure, it frequently does not so result, and except in one of the conditions mentioned, namely, entire filling of the sac with clot, can only act as a temporary barrier against further enlargement, unless the thrombus undergoes secondary changes presently to be described. It is vain to contend that filling the sac with firm coagula is potentially a cure, if relapses can and do occur, for we are not studying how to effect a temporary arrest in growth in aneurisms, but their *cure*. Examination of other specimens will show that the thrombi remain either partly, or throughout their whole extent, adherent to the lining membrane of the aneurism. At these points, or surfaces of contact, plasma cells penetrate the thrombus, probably passing along routes previously channeled out by invading white cells, if recent observations on experimental thrombi in blood-vessels are to be relied on. Still later, the thrombus will be found to have been replaced by a mass of cells—not leucocytes—which, becoming vascularized, and developing into connective tissue, shrinks, until a mere nodule of fibrous tissue remains, and a *real* cure is effected. This result is all the more prompt and certain if the sac-thrombus so extends as to occlude the mouth of aneurism, and the artery above and below, because the blood *cannot* insinuate itself between the sac and the clot, which separation would at once arrest the process of organization just outlined. The failure of this obliteration of the artery in the immediate neighborhood of the mouth of the sac explains the temporary benefit which so often is all that results after apparent complete consolidation of an aneurism, because the blood separates the thrombus from the sac; if the blood thus introduced coagulates, organization can now be effected, provided no further disturbances occur, and this secondary thrombosis can sometimes be recognized post-mortem.

The absolute certainty with which a clot which has caused the cessation of all the physical evidences of aneurism—except the tumor—will become disintegrated, with return of all the symptoms, unless it is allowed to remain in close contact with the sac, must be strongly insisted upon. The possibility of temporary thrombosis separation of the clot from the sac, and secondary clotting with final organization must not be forgotten, as has just been pointed out. It is then manifest why soft, red thrombi are less desirable than white, laminated ones, not only because they are not physically so stable, but because they must contract, thus either wholly or partially ceasing to remain in contact with the aneurismal wall. For this reason they are incapable of penetration by organizable cells. Such methods of cure are both theoretically and clinically the best which most fully combine the following requisites, namely, such a marked slowing of the circulation, or breaking up of its momentum, that first plaques can collect on some diseased or damaged portion of the lining of the sac, then white cells can accumulate—so that fibrin may form—and that such conditions shall exist as will allow of no mechanical disturbance of the absolute contact of thrombus and sac-wall. The necessary change of the interior surface of the aneurism, which under favorable circumstances initiates white thrombosis is, probably, very often effected by the vascular disease productive of the aneurism; but may not the failures so frequently met with, of inducing the formation of white thrombi in aneurisms, be due to the sufficient extent and nature of this change, since "not every part of the internal wall of the vessel" was "covered with a thrombus" in Welch's experiments, "but such parts, even when severely lacerated," may be "entirely free from thrombi?" Each successful method does not combine in the highest degree all the essentials described as requisite. Let us analyze the various methods of treatment in vogue, in order to ascertain upon what their success depend. Proximal arrest of the circulation promptly lessens the local blood pressure, and relieves all the direct momentum of the blood, and often allows, after establishment of the collateral circulation, of just the proper rate of blood-flow through the sac to favor accumulation of plaques and all the other processes requisite to the formation of white thrombus. This method rarely permits of disturbance of the relations between the clot and sac, but when failure results it comes from mechanical disturbances of the thrombus, because of the establishment of an unusually free collateral circulation, and, probably, also from the coincident lack of such an alteration of the sac-lining that the initiatory steps toward the formation of white thrombi can occur. My colleague, Professor Lombard, has suggested after ligation interference with the vaso-motor and blood supply to the sac from constriction of the vaso-vatorum, may account for some of the failures, because of nutritive alterations in the sac-wall.

How does distal arrest of the circulation act? The effect of the direct momentum of the blood is diminished, but in a less efficient manner than by proximal arrest; distal arrest does not directly lead to the formation of white thrombi, but may do so secondarily by creating eddies and still bays by the mechanical effects of soft coagula; moreover, the contact of thrombus and wall is more apt to be disturbed. Unless the sacculation is unusually favorably located distal ligation for innominate and aortic aneurism will usually only temporarily arrest the disease, but cannot produce what I have laid down as a genuine cure. Are there no other means but proximal or distal arrest of circulation whereby the same mechanico-pathological conditions can be secured? Certainly; if any way the direct momentum of the blood current can be mechanically broken up into minor currents, eddies and relatively quiet embayed collections of blood will result which, if the other chief requisite be present, namely, change of the sac-wall, will give rise to white clot formation; these thrombi, if maintained in contact with the altered sac-wall, can now go on to organization. This mechanical action on the blood current seems to me the far most reasonable explanation of the good effect produced by the introduction of catgut, coiled wire and electrolytic needles into the aneurism, which can only determine *at first* the formation of the red thrombi. When no further changes occur after such therapeutic efforts, either no perceptible effect is produced, possibly rupture of the sac is hastened, or only temporary benefit results until the soft clot disappears. The absence of sufficiently extensive alteration of the lining of the sac explains why these methods, including acupuncture, so commonly fail, and why Macewen's "needling" has been followed by the surprising measure of success which has been reported. This is because the latter plan is a combination of interference with, and partial splitting up of the direct momentum of, the blood, was such a preparation of the interior surface of the sac as certainly induces accumulation of blood plaques, followed by the formation of that relatively immovable white thrombus most capable of going on to organization. The necessity for extensive irritation and consequent plastic infiltration of the lining coat of the aneurism is proved by the observation of Macewen, that but little thrombus forms around the needle punctures, but does upon all those portions of the sac where the needle has continuously scratched for many hours, that is, has inflicted such a kind and extent of injury as will insure a plastic inflammation of the sac-wall. Again, it must be remembered that this process is repeated until it is believed that all accessible portions of the sac have undergone change; that by this means those weak spots of the wall which are about to yield can be reinforced first, something of which no other plan of treatment holds out any certainty. Still further, the residence of needles from one-half to one and one-half minimum in circumference, for periods of even so long as forty-eight hours, must exert a very decided effect upon the blood momentum and current, an effect the extent of which I hardly think can be appreciated unless actually demonstrated by experiment.

To recapitulate somewhat, Macewen's "needling" should supercede the introduction of catgut, wire, et cetera, because this method does not give rise to the formation of soft, red thrombi; it does cause the deposition of white thrombi, which will remain in contact with a lining membrane prepared to induce organizations of the clot; the clot can be deposited upon the weakest portions of the sac-wall, and eventually upon all accessible portions, not in a haphazard manner, which I have explained, often serves to precipitate the fatal issue; the cure, if accomplished at all, must fulfill the conditions laid down as requisite for a true cure; by careful exploration of the sac with the needles, information can be obtained permitting of the needle being so placed as to divert the direct momentum of the blood from the weakest portions of the sac, for from a few hours to even forty-eight hours, and that too, while a thrombus is forming at these weakened spots.

In conclusion, permit me to submit for your discussion the following propositions, which the present state of our knowledge relating to aneurisms seems to warrant. Future clinical results can alone determine whether I have correctly indicated them.

May I ask the Fellows to first discuss each proposition separately, according to each only the weight its importance deserves, rather than to consider them together, which can only lead to confusion.

THE TREATMENT OF CERVICAL ANEURISMS.

(1) All methods should be supplemented by recumbency and diet.

(2) Proximal compression, when feasible, should always be tried, and where the arterial coats are seriously diseased should supercede ligation.

(3) "Needling" should supplement pressure when the case is progressing rapidly; possibly it is advisable in all cases suitable for compression, and is certainly to be employed where this method fails in cases with highly atheromatous vessels.

(4) Proximal ligation, having been rendered much safer of late by the use of aseptic precautions, less absorbent ligatures and the avoidance of all injury to the arterial walls by employing the "stay-knot," is permissible when the arterial walls are relatively sound until experience decides whether or not "needling" is superior in its results.

(5) Since recurrence after proximal ligation almost certainly results from lack of proper changes of lining, "needling" is then clearly indicated.

(6) Where the location prevents proximal arrest of blood current, "needling"

is the best operation; possibly distal compression—rarely feasible—might aid in the deposition of thrombi.

(7) For the reasons already given, although occasionally successful, the indications for the permanent introduction of such foreign bodies as wire, horsehair, and so forth, into aneurismal sacs are so much better met by "needling" that such procedures had better not be adopted.

(8) The modern revival of the older method of extirpation of aneurisms should not be attempted for spontaneous cervical aneurisms.

THE TREATMENT OF THORACIC ANEURISMS.

(1) All methods should be aided by the employment of rest in bed and proper diet.

(2) The permanent introduction of foreign substances should not be employed.

(3) "Needling" should be tried, aided by distal compression, when feasible, during the use of the needles; if this fails, distal ligation should be resorted to.

(4) Distal interruption of the blood-current by simultaneous ligation of the carotid and subclavian arteries may be tried.

(5) "Needling" is indicated when complete or partial failure follows distal ligation.

THE TREATMENT OF ABDOMINAL ANEURISMS.

(1) All methods should include recumbency and diet.

(2) "Needling," when this can be done without injury to the hollow viscera, is the most promising plan.

(3) Proximal or distal compression may be tried, with or without "needling," but to be effectual must be done under anesthesia.

(4) The permanent introduction of foreign bodies into the sac is unadvisable (see proposition number seven, carotid aneurism).—C. B. Nancrede, M. D., in *Annals of Surgery*.

PATHOLOGY.

BACTERIAL POISONS.

No SUBJECT at the present day can be more interesting, and yet but little is known respecting bacterial poisons. The work of Gamaleia ("Bacterial Poisons," Detroit, 1893—American edition, translated by E. P. Hurd, M. D.), despite its literary merit and the great army of facts, is a little disappointing, and one really wonders on reading this book that so much could be written, and so little information given. The first experiments of Seybert, Gaspard Stich, Magendie, Dupuis and others established the symptoms and lesions of experimental septicemia. Panum showed that it is produced by a chemical poison; Bergmann and Schmiedelberg determined this poison to be an alkaloid sepsine. This result marks a first stage in the investigation. Down to about 1870 Panum's views were almost universally prevalent. Bergmann's sulphate of sepsine, obtained in crystalline form from putrid infusions, was believed to be the veritable putrid poison that causes septicemia, and the action of microbes was ignored. Sepsine was thought to be a ferment, acting in infinitesimal quantity. It was, however, soon found to be impossible to ascribe all the forms and symptoms of septic poisoning to sepsine alone, and that the poisons produced by putrefaction were many and various, according to certain conditions; and there was for many years a contest between the chemical and the vitalist doctrines, ending in the victory of the latter. Liebig's hypothesis that the soluble ferments are albuminoid matters in process of decomposition was overthrown by Pasteur, who demonstrated that fermentation and decomposition do not exist apart from the life of organized ferments. Moreover, the contagionists were soon able to prove the fallacy of the chemical doctrine by showing that certain microbes separated from their morbid products were able to produce determinate diseases. At the same time was established the fundamental notion, proclaimed by Cohn, of the specificity of bacteria, and bacteriology took its place among the sciences. The vitalist doctrine was not, however, in absolute contradiction to the chemical; and Panum has the merit of having understood the possibility of reconciling the two theories. He affirmed that "it is incontestible that the putrid poison is chemical, but that it might be produced by a microbe, even a determined microbe. In diseases both the pathogenic microbe and the production of the poison by the microbe, may play their respective parts." These words, uttered in the infancy of bacteriology, have been shown to contain a profound truth. The discovery of ptomaïnes by Selmi, Brieger, Gautier and others, marks the next stage in progress. These discoveries date from about 1870. The list of cadaveric alkaloids naturally resulting from putrefaction of albuminoids was soon quite large; and the query was soon raised whether it might not be dangerous to eat flesh, or even fish, and other animal products, for fear of ptomaïne poisoning. At least, invalids with weak digestive functions were warned of the danger. Later on, a careful criticism of the work of Gautier, Nencki, Brieger and others justified looking with suspicion on their different methods of extraction of ptomaïnes. There is even warrant for believing, as Gamaleia shows, that these methods were likely to create artificial products which did not preëxist in the albuminoids analyzed. A part of the work of these experimenters will still stand; but the spontaneous formation of ptomaïnes is not so constant a phenomenon as was taught, and the microbial poisons are not ptomaïnes. As for the typhotoxine of Brieger, Bassi has shown that it does not preëxist in the cultures of the typhoid bacillus; and Salkowski has never been able to find the peptotoxine of Brieger in the products of gastrical digestion; in fact, Bouveret and Devic have proved this supposed ptomaïne to be "an artificial product which is formed at the expense of albuminoid matters by the combined action of HCl and alcohol." Roux and Yersin, as a result of their experiments on the poison of diphtheria, conclude that by all its reactions the diphtheritic poison resembles diastases, and none the less by its intense activity in infinitesimal doses. Gamaleia, after a somewhat exhaustive examination of the whole subject, and with the help of researches of his own, concludes, "that the toxic action of the bacteria is not linked to their fermentative action; it does not coincide with any known diastasic action." The microbial poisons have been supposed to be "secretions;" nevertheless, this comparison with secretions accounts but superficially for the facts. "First, there are certain pathogenic bacteria which produce such diseases as tuberculosis, cholera, and charbon, where we do not find any toxic secretions. Then, again, even the productions of poisons in diphtheria and tetanus has a very superficial correspondence to a secretion. In fact, the quantity of these poisons in the culture liquids does not grow proportionately to the development of the bacteria themselves. On the contrary, an attentive observation reveals the following facts: At the very first, and at the most active moment of the life of the microbes, the liquid of culture is acid, and devoid of all toxic power. Later, when the bacteria have ceased to multiply and are deposited at the bottom of the culture flask, the liquid becomes alkaline and very highly toxic. Its toxicity augments progressively with the duration of the sojourn of the bacteria in their alkaline liquid of culture." The explanation of this fact he finds very simple: "The poison is contained inside the bodies of the bacteria, and is extracted slowly by the alkaline liquid in which they are macerated."

We have not time to pursue the subject further, and must refer those interested in the subject to the treatise itself. In short, Gamaleia believes that the microbian poisons "are the results of the creative syntheses of the bacteria, and come from their bodies." "Thus is again confirmed our hypotheses respecting their chemical nature, which identifies them with the constituent parts of the nuclei of cells—the vitellines and nucleines. The toxicity of the microbian bodies may have also a teleological signification explicable from the point of view of the struggle for existence and of natural selection; for the toxicity of the bodies of bacteria may be useful to them as a means of preserving them against aggressors which would devour them."—*Boston Medical and Surgical Journal.*

THERAPEUTICS.

SOME FACTS IN REGARD TO THE ADMINISTRATION OF IRON.

Every one who makes a careful study of therapeutics must realize that it is the condition of the individual case rather than the real disease from which he is suffering which indicates the use of this or that remedy. This law of therapeutics finds exemplification in the subject of the administration of iron, since the various preparations of iron act in different ways in different stages of disease. Perhaps the most common mistake which is made in the prescription of iron is its administration to that indefinite class of cases which the doctor is apt to classify as suffering from "debility," because he is unable for one reason or another to discover the true cause of their condition. In other words, it is the routine practice of many physicians to employ iron as a tonic wherever they find that there is derangement of function, which they believe to be due to lack of tone, or torpidity. While iron is, above all other remedies, the most valuable in certain conditions associated with the blood, whether these conditions consist in alterations of this fluid or in the presence in it of septic material, it is not a remedy which possesses in itself the power of adding tone to the organism or of stimulating it to increased exertion. It probably does not even have the transient stimulating effect which is possessed by many of the simple bitter tonics, and does more toward disordering the digestion of many of those who take it than is commonly believed. In the first place, we believe that it is in the anemia which is due to a lack of hemoglobin, rather than that which is due to a lack of corpuscular elements of the blood, that iron finds its chief usefulness; and, secondly, we are confident that a common mistake is its administration in too large doses. Iron is a remedy which is present in very small quantity in the human body; the normal amount is preserved in the ordinary individual by the trace which it takes in his body, and compared with this trace the ordinary doses of iron are simply enormous. Some years ago the writer of this editorial made a comparative study of the influence of iron in small and large doses on twelve cases of anemia which, as far as possible, resembled each other in every way. Six of these people received two or three grains of reduced iron three times a day, and the remaining six received one-third of a grain three times daily. The six that received the small doses had far less disorder of digestion than those which received the large doses. Their recovery was as prompt as those receiving the large doses, if not more so, and the attending physician had the satisfaction of knowing that he was accomplishing a good result with a small quantity of medicine, instead of using large amounts of it. It is true that in some conditions in which there is gastro-intestinal disorder associated with the formation of gas arising from fermentation or decomposition, and in which the anemia is largely due to destruction of the constituents of the blood by the absorption of poisonous materials from the intestine, large doses of iron are absolutely necessary. Necessary, because in these instances only a small quantity of iron is absorbed, and the greater amount of it forms a sulphide of iron, or other compound, with the contents of the intestine. Where we have, therefore, a destruction of the iron in large amount it may be necessary to give it in full dose; but, unless this is the case, we are firmly convinced that one-eighth of a grain of reduced iron will in most cases give better results than three grains. It will be found under these circumstances that constipation, which we all know is a frequent sequence of the administration of iron, more rarely occurs, and, as a result, that the general health of the patient is improved. We also avoid in this way the so-called iron headache, which in some cases is produced by constipation, and in others so rapidly develops if there exists a condition which we call, for lack of a better term, "the rheumatic or gouty diathesis." In other words, gouty and rheumatic persons suffering from anemia, who suffer from severe headaches under the ordinary administration of iron, may obtain much benefit from this drug if small doses, which will be absorbed, are employed in preference to the large ones, which are not entirely absorbed. But even this hope sometimes proves delusive. We believe that, unless the physician desires to get the astringent influence of the sulphate of iron, he will get good results from small doses of the sulphate of iron in exactly the same way that he gets good results from small doses of reduced iron, and that it is only when the diarrhea accompanies the anemia that it is necessary to administer large doses of sulphate of iron for both its hemic and astringent influence.—*Therapeutic Gazette.*

MEDICAL MELANGE.

INSOMNIA PARTIES.—A society young woman of Buffalo, says the *Medical Record*, has devised a novel entertainment, which is shortly to be made public. It is to be a "reception for people who cannot sleep at night." Among her friends, she says, are a great many very delightful people who are troubled with insomnia, and who confess that they spend many frightful, wakeful hours walking the floor, looking out of the window, rocking in easy chairs, trying to read or write, and in other useless and tiresome occupations. When her plans are fully matured, this original young woman intends, on at least two nights in every week, to be "at home" to those distressed female friends from midnight until morning. The guests are requested to appear in any unique, respectable bedroom gown, bath robes not excluded; the lights are to be dim, soothing music and stupid conversation will be the only diversions permitted, hot chocolate and light wafers will be served, couches and easy chairs will be provided in abundance, and the insomnia victims are earnestly desired to fall asleep as soon as possible. It is whispered that prizes will be offered for the first snore, but this detail is not authentically announced. The reception is to be a fact, however, and an eager expectancy as to invitations is in the air.

STARTLING EFFECT OF ANIMAL EXTRACTS.—Professor Solomon Muhlbach reports the following case (*Medico-Financial World*): J. L. S., aged twenty-two when first treated in 1878. A native of Boston. This young man was a slender, consumptive-looking fellow, whose three brothers, an uncle, and aunt had died of phthisis. He was a close student, devoting his whole attention to literary pursuits. His muscular development was much below the normal. He had an annoying cough, had lost twenty pounds in weight during the preceding six months, and was troubled with night-sweats; no hemorrhages. Being convinced that this young man was a victim of that dread disease, the "white dead" of our modern times, consumption, I immediately began treating him with my (at that time) new extract of hogs' lungs, to which I had given the name pneumonine porca. This I injected subcutaneously, in proper dosage, so many times daily as his condition required. There was a marked and rapid improvement in the condition of his lungs. Cough became much less frequent, expectoration decreased, night sweats ceased. I now began to give him bicepine ursa horribilis in proper dosage, and was extremely gratified to note immediate increase in his muscular development. Coincident with this improvement there came an unexpected and astounding moral change in this young man. He developed marked hoggish and bearish traits of character! One day, entering my laboratory without permission, he drank off at one gulp a large percolator full of mixed extracts of all the organs of the bear. I was horrified, expecting a fatal result, but to my surprise he only expressed gratification and pleasure at having gotten such "good soup." The changes that henceforth ensued in the physical mental, and moral constituency of this unfortunate young man, consequent upon his ingestion of the animal extracts of the hog and the bear, were rapid and lamentable. He forsook his literary pursuits and became a sport, finally drifting into the prize ring, where he soon attained a most deplorable popularity and success. The prolonged effects of this medication in 1878 are somewhat remarkable, for it was not until 1890 that the action on the physiological remedies began to wear off, and only in 1892 did he renew his literary labors, so suddenly terminated fourteen years before. It is especially noteworthy that his bicipital circumference which was eight and three-fourth inches before treatment, increased to nineteen and three-eighths inches after treatment. The hint given me by the moral changes noted in the preceding patient will be of advantage in future.

Rheumatism and Arterio-Sclerosis.—Dr. Manteuffel discusses the relation of so-called rheumatism in the lower extremities and vascular disease. The pains complained of are situated in varying parts of the feet and legs, the feet are cold, and numbness may be experienced. The skin looks pale, and is often desquamating in minute scales. Sometimes patches of characteristic erythematous edema may be seen with an increase in the symptoms above described. In these cases the pulses should be carefully examined. Differences may be present, and the arteries may be found degenerate. These manifestations are not to be confounded with articular affections, nor with sclerosis of the veins. No varices or pigmentation are present. Localized edema is, of course, not to be mistaken for more general edema due to venous obstruction. It may be difficult to distinguish this affection from neuralgia, and in cases of arterio-sclerosis the nerves may also be involved. For proof from morbid anatomy the author refers to cases of angio-sclerotic gangrene slowly developed and preceded by pains. He cites a case of gangrene in a girl, nineteen years of age, with diseased arteries, in which rheumatic pains had long preceded the gangrene. As to whether these rheumatic pains are a preliminary stage to gangrene cannot be denied with certainty in some cases. If the collateral circulation is insufficient, gangrene occurs, but this last stage is often not seen. The author warns against local massage in these cases of arterio-sclerotic rheumatism. Some patients whose disease is written of as rheumatism, or even hysteria, thus really suffer from arterio-sclerosis.—*Deutsche Medicinische Wochenschrift.*

Pessimism as a Neurosis.—In the *American Journal of Psychology* two recent works dealing with pessimisms are referred to: Magalhaes's conclusions are based upon the study of avowed pessimists such as Leopardi, Schopenhauer, Flaubert, Baudelaire, Amiel, and Byron, and of others who, without the creed of pessimism, reveal its characteristics. Among these are Carlyle, Swift, Tolstoï, de Sévancour, Shelley, and Chateaubriand. Pessimism is regarded as a species of nerve weakness, of which the chief character is nervous instability with alternation of irritability and prostration. The subject is super-sensitive; impressions call forth intense and prolonged reactions followed by exhaustion. He is characterized by a general hyperesthesia, which naturally results in an excess of suffering. From instability and hyperesthesia results discord between the feelings themselves—between the feelings and the intelligence—between the feelings, the ideas, and the volitions. The discord between the feelings shows itself in a great variety of paradoxes, contradictions, and inconsistencies. To the pessimist the possession of a desired object does not atone for the former privation. The pain of unsatisfied desire is replaced by the pain of *ennui.* With inability to enjoy what he has are coupled extravagant expectations regarding that which he does not have. He is extremely susceptible, both to kindness and to contempt. He passes suddenly from violent irritability to languor, from self-confidence and vanity to extreme self-abasement. His hyperesthesia results in intellectual discords. For this involves a great vivacity of the intuitive imagination, which favors the setting up of extravagant ideals lacking in solid representative elements. Hence a gap opens between his ideal and the actual. He can never realize the ideal he pursues, and so his feelings take on a somber hue. From this excessive idealism results a mania of doubt (Amiel), a certain distrust of all his objective knowledge. It assumes another form in extreme subjectivism. The pessimist is haunted by images of tiniest religious scruples, suspicions, fears, and anxieties, resulting in alienation from friends, seclusion, misanthropy. The pessimist is further characterized by an incapacity for prolonged attention, a refractory attention, and a feeble will. These result in inaction, quietism, reverie, abolition of the personality, and annihilation of the will, amounting sometimes even to poetic or religious ecstacy. More than Magalhaes is Dr. Huyghe concerned with the pathologic basis of pessimism. He connects it with arthritism, a constitutional disturbance of nutrition and circulation, resulting in local congestions of vitiated blood. These may result in gout, rheumatism, kidney or brain diseases. Is there any physic aspect to these maladies? The ancients associated hypochondria or melancholia with all of them. Pessimism would seem to be the mental side of arthritism.

SHOULD WOMEN SMOKE?—Some years ago, under the stimulus of Mr. James Parton, there was much discussion over the questions, "Will the coming man drink wine?" and, "Will the coming man smoke?" Both these questions have been answered in the affirmative so far as the nineteenth century is concerned. A more serious question is now agitating the English public, and it is simply this: "Will the coming woman smoke?" It appears that the habit of smoking cigarettes is increasing among a certain class of English women, and we refer to respectable women; for the prostitute has always been addicted to the cigarette. There have appeared public defenders of the practice. The plea is that if men smoke, women ought to be allowed to do it also; that the habit, if practiced at the proper places and times, is not an offensive or indelicate one, nor particularly injurious. Looking at the question from a purely medical point of view, we doubt if the practice of smoking will be sanctioned by science or experience. Tobacco is undoubtedly a depressing, though agreeable, poison. It is particularly injurious to persons of an emotional and over-sensitive nervous system, and hence it would harm more women proportionately than it does men. Aside from this, we regret to say that lovely woman is less to be trusted with narcotics and stimulants than man—and the latter animal is weak enough. Hence excess and abuse of the narcotic would be more frequent. Perhaps most of our readers will think it foolish even to treat seriously such a proposition as that which we are discussing. But these are *fin de siècle* times, and no one knows what bizarre fashion may suddenly become the rage. Most emphatically we should say that the coming woman, as well as the woman who has already come, should not smoke. She can win the heart of the smoker, but she should beware of the smoker's heart.—*Medical Record.*

A TOUCHING TRIBUTE TO MEDICAL HEROISM.—The following touching tribute to medical heroism is from the *New York Sun.* The *Sun* is always just to the medical profession, and in this instance speaks, as it has often done before, from its heart: "One of the first victims of the yellow fever at Brunswick last month was a practicing physician, who caught the infection from a patient upon whom he was attending. On Sunday last, one of the physicians of the New York hospital, Dr. Walter Vought, died of typhoid fever, the infection of which had been communicated to him by a child in the hospital. Again, a few days ago, two young doctors of this city caught the small-pox from a patient who was afflicted with it. There are always risks for doctors in attendance upon patients suffering from contagious or infectious maladies. Yet they are always ready to brave danger, without flinching, in the interest of humanity. Honor to our, noble army of doctors! Hundreds of them volunteered for service here last autumn, when the city was threatened with cholera. We do not know how many of them have sent word to Surgeon-General Wyman that they stand ready to go to Brunswick, or to any other part of the south in which the yellow fever may break out. Whatever be the risks from any disease, the medical faculty is ever willing to confront them. Long live the doctors! We have sent American doctors to the cholera-infected ports of Europe, and several of them have done splendid work there this year. If a hundred of them had been needed, we have no doubt a thousand of them would have offered their services. Heroes are the doctors. They will enter a pest-house without shrinking, attend to every case in it, and do all that can be done to relieve the sufferers. Blessed be the doctors! They are men of science, men of skill, men of earnest purpose, men of sympathetic disposition. They are devoted to their duties. Dr. Walter Vought, who died of typhoid fever last Sunday in the New York hospital, of which he was house physician, was a man of talent, and still in his early prime. He took charge of the quarantine station at Fire Island last year during the 'cholera scare;' he had rendered service in the Vanderbilt clinic; he died in a hospital. Though he had but just turned thirty years of age, he was the author of works upon malarial fevers, the cholera, and other diseases; he had already won a name in the profession. We knew him personally, and we can testify that he was a high-minded gentleman:

> 'There's rosemary, that's for remembrance: . . .
> and there is pansies, that's for thoughts.' "

CEREBRINE IN THE TREATMENT OF LOCOMOTOR ATAXIA.—At a recent meeting of the New York neurological society, Dr. Graeme M. Hammond presented a case of locomotor ataxia which he had been treating with hypodermic injections of cerebrine. Six years ago the patient, a man aged forty, had begun to suffer with double vision. This, after several months of treatment, had disappeared and for a time he had been quite well. Then the typical symptoms of locomotor ataxia came on. There was complete loss of the knee-jerks; he had sharp pains in his legs; the ataxic gait was well marked; there was inability to stand with the eyes closed, even when the legs were some distance apart; he had difficulty in evacuating his bladder and bowels; his sexual power was lost; and he had a sense of constriction around the waist. There were no eye symptoms. The man denied syphilis. Treatment was begun about ten weeks ago, and consisted of a daily hypodermic injection of cerebrine, five minims, combined with five minims of water. Dr. Hammond said he presented the case with some diffidence, on account of the method of treatment employed; no one had had less faith in these animal extracts than himself. The improvement in this case, however, had been very marked. The man's sexual functions had been perfectly restored, he had complete control over his bladder and bowels, the sharp pains had disappeared, his general health had improved, he was able to run up and down stairs, and could stand fairly steady with his eyes closed. The knee-jerks, however, had not returned. No other treatment had been employed. The improvement had been gradual and steady, and had begun about a week after the first injection.

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

SOME ILLUSTRATIVE SURGICAL MEMORANDA.*

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CERTAIN facts of modern medical history have, perhaps, served to render the expectation not unreasonable that on the present occasion some new and startling theory, some original method of practice, some new operation, or, at least, some special instrument or device should be offered for your consideration. At all events it will be conceded, I hope, that the time is past when the East is regarded as the only direction in which it is worth while to look for suggestive ideas, possessing at once the advantages of originality and of practical utility.

When the accounts are fully and fairly balanced, my conviction is, that so far as the healing art is concerned, the West will be found very little, if at all, below the general average of the various sections of the civilized and scientific world. Having said this much, I desire to lose no time in relieving your minds of any apprehension you may feel that I come here from the West with the intention of trying to disturb your mental equilibrium or confound "the counsel of your firm philosophy" with some startling novelty, theoretical, practical or otherwise. My simple aim is to present to this distinguished body a brief and fragmentary glimpse of my own surgical practice, together with a brief résumé of some of the principles by which my work is guided.

First, I invite attention to the subject of ununited fractures of the long bones. It so happens that a large number of this unfortunate class of cases have fallen into my hands after the ordinary devices for relief have been tried in vain. My treatment in cases of long standing has at last become limited to two expedients, namely, first, the application of an external splint or support, and second, amputation followed by resort to an artificial limb where such an appliance is feasible.

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* Read before the NEW YORK STATE MEDICAL SOCIETY.

Not long ago I advised amputation of both legs below the knee of an unfortunate man for this condition, after many months had been spent in vain endeavors to secure union by resection, wiring, ivory pegs, et cetera. Examination of the amputated limbs demonstrated a condition of atrophy and of fatty degeneration at the points of fracture, which, to my mind, fully justified the radical course resorted to. In the case of other bones in which the prospect of securing union seemed equally hopeless, I have been able to afford valuable assistance by the application of a well-fitting splint or brace. In this connection I submit that heretofore surgical writers have failed to recognize the most common, the most efficient, and the most reasonable of all the causes which produce non-union of fractured bones, namely, great direct violence in the primal production of the fracture; violence so severe that the vitality of the bones and other tissues involved is destroyed or diminished to so great an extent that efficient reparative action is feeble and imperfect, and degenerative processes are initiated which are progressive and in time render union by bone impossible. In all cases of non-union which have come to my notice, and they have been many, the original injury was *direct* and *severe*. In the case of double amputation of the legs just mentioned, the fractures were caused by sudden contact with the cow-catcher of a rapidly moving train. Confirmation of the views here expressed is furnished by the clavicle. The clavicle is the bone most seldom affected with non-union, and we know that fractures of this bone are almost invariably caused by indirect violence. Only two cases of non-union of the clavicle have come to my notice, and both of these were caused by direct violence—one by the kick of a horse and the other by a blow from the wheel of a runaway carriage.

If this view of the causation of non-union is correct, it follows as a logical deduction that SENN's ingenious proposition to treat ununited and compound fractures by ferrules and splints of bone will apply to compound fractures more than to ununited fractures, and that in the latter cases, if it is to be of any use at all, it must be resorted to early, that is, before the degenerative processes inseparable from such injuries have advanced too far. Up to the present time SENN's method lacks almost entirely the endorsement of actual experience. My belief and sincere hope is that it will prove to be a real advance in the treatment of a very important class of cases.

Permit me now to call attention to the subject of amputations at the hip- and shoulder-joints. One case of primary amputation at the hip for a railroad injury and three cases of amputation at the shoulder—one primary for a railroad injury, one for a large sarcomatous tumor and one for a very extensive burn many years before—have recently fallen to my lot. The injury in the hip case was peculiar. The unfortunate young man (his age was twenty-three years) was run over by an engine. The entire skin of the left lower extremity was stripped off and hung in a long flap from the upper portion of the gluteal region. The lower part of the abdomen was also denuded and the testicles exposed. No bones were broken, but the soft parts throughout the whole extent of the limb were filled with coal dust and foreign matters of various kinds. The great vessels in Scarpa's triangle were exposed as plainly as the most skillful dissection could have demonstrated them. The patient was cold, pulseless and seemed to be almost at his last breath when I saw him at midnight, November 12, 1892. Stimulants were resorted to, heat was applied to the body, and in an hour a slight improvement was observed, and under the circumstances it seemed proper to remove the limb. I first placed ligatures on the femoral vessels, then pared out a flap from the loose skin which had been torn from the buttock, and lastly I disarticulated and removed the limb with one or two sweeps of the knife. The utmost precautions were taken to save blood, and, as a matter of fact, I do not think that the patient lost more than one tablespoonful in the operation. To the surprise of all concerned, this patient made a rapid and complete recovery, and notwithstanding the fact that a considerable portion of the flap sloughed, the stump finally healed perfectly, and he left the hospital within eight weeks of his admission.

In such an injury as this the primary ligature of the main vessels seemed the most reasonable procedure for the control of hemorrhage. I think it might often be resorted to with advantage, especially in the case of tumors of the thigh, in which the upper limit is imperfectly defined and uncertain. Still, as a rule, notwithstanding WYETH, SENN, and others to the contrary, I must declare my partiality for LISTER's aortic compressor, of which I here exhibit a somewhat primitive-looking specimen which I had made for my own use in an emergency, by a common blacksmith, more than twenty years ago, and which I have repeatedly used for hip amputations, aneurisms of the femoral artery, dissecting out vascular tumors from the thigh, and so forth, and always with the most perfect satisfaction in every respect.

Three recent cases of amputation at the shoulder-joint seem to me worthy of being recorded on the present occasion. The first was a case of primary amputation for a general crush of the whole upper extremity with laceration and destruction of the skin to such an extent as to make the formation of a flap a matter of some little ingenuity. The first step in the operation consisted in the exposure and ligation of the main vessels. The patient had been conveyed many miles from the place of accident in a railway collision, and had lost so much blood that every possible precaution was demanded to prevent further loss. My operation was nearly a bloodless one, and still the shock was so great that the most active stimulation, combined with the infusion of sodium chloride solution, barely sufficed to tide him over. Nevertheless his wound, with its irregular and erratic flap, healed by first intention and he was dismissed in excellent condition on the tenth day.

The second was the case of a colored man with a large tumor in the axilla, filling that space completely and extending along the muscles and fasciæ of the arm and forearm right down to the wrist. The biceps, deltoid and other muscles were imbedded in the growth. In this case also the only efficient method of restraining the bleeding seemed to be the ligation primarily of the main vessels. This was done and the operation completed without difficulty, and the patient was dismissed cured on the tenth day. Five months have elapsed and so far no signs of return have appeared.

The third and last case in this series presents one or two points of special interest. C. A., aged thirty-eight years, when a boy of five, was very severely burned over the right side and shoulder, as a result of which the arm became attached by deep and dense cicatricial tissue to the side almost down to the elbow. About two years ago the scar tissue on the outside of the arm began to break down and an obstinate and foul ulcer was established, which refused to heal in spite of innumerable applications which were used for the purpose of inducing healthy action, and the patient's general health began to suffer seriously. The appearance of the ulcer suggested malignant degeneration, and the microscope confirmed this suspicion. Amputation of the arm at the shoulder was recommended and readily accepted by the patient. In this case also the simplest and only efficient method of restraining hemorrhage was by cutting down and ligating the main vessels first. This was done without very much trouble, although the cicatricial contraction had imbedded all the axillary structures in one confused mass and made their isolation a work of time and care. All possible economy was exercised in the way of preserving healthy tissue for a flap, but a large open sore on the side had to be left to granulate. Grafting was employed to aid this process, and at the end of the sixth week the patient was dismissed in perfect health and with his wound almost completely cicatrized with good, sound tissue.

In the next place let me present a case or two from the domain of the nervous system in which of late years surgery has done much to shed light and hope, where formerly all was darkness and despair. Two well-marked cases of spina bifida have fallen to me within a year, in both of which amputation by elliptical flap has proved entirely successful. One occurred in the case of a child a year old and was preceded by injections of iodine into the sac. The other, in a young man, was seated just beneath the occipital region, being the size of a large orange, and, as may be supposed, was a source of much irritation, as well as mental distress to the patient. It is not claimed here that this method is applicable in all cases of this affection, but my belief is that by a judicious combination of injections of iodine solutions and subsequent amputation a very considerable proportion of cases of spina bifida may be safely and effectually disposed of.

Two cases of tumor of the median nerve of the arm have passed through my hands within the space of a year or two. One of them was a solid, apparently fibroïd degeneration of the nerve, the patient being a young woman who very reluctantly submitted to excision after numerous palliative measures had been tried in vain, and after the pain had become both severe and constant. The other case occurred in a man at fifty-eight years, and had also become so painful that the patient was ready to submit to anything that promised relief. Complete excision was performed, and I am able to show the specimen which will be found to be a cyst over which the nerve fibres are spread out in a wonderfully uniform membranous form. Whether a mere coincidence or a logical sequence, the fact remains that in both of these cases which were operated upon under chloroform, the patients, at the moment of division of the proximal portion of the nerve, became absolutely collapsed and were resuscitated only after long-continued and extremely vigorous efforts, in which all the ordinary methods available in such cases were resorted to. In each case the recovery was ultimately complete, although a slight degree of paralysis remains in the parts supplied by the median nerve.

On August 20, 1882, I amputated the left breast of a lady aged sixty-five years, on account of a schirrous growth which involved the whole of the gland, which was an unusually large one. Every clinical sign of malignant disease was present and the microscope fully confirmed the diagnosis. More than eleven years have now passed, and this patient continues alive and well, with no sign of return or of secondary development anywhere. About five years ago this lady's son, a man of forty, came to me with unmistakable carcinoma of the tongue, for which I removed the entire organ after every other conceivable treatment had been tried. He also made a good recovery and has continued well up to the present time.

I now desire to present briefly another case of carcinoma in which, if the result is unsatisfactory, the history is interesting and suggestive.

J. H. R., aged forty-one years, applied to me on November 6, 1890, on account of an ulcer on the palmar surface of the first phalanx of the ring finger of his left hand. According to his statement the trouble commenced in what seemed to be a common wart, which he tried to eradicate with the aid of his pocket knife. The result of his treatment was a sore, which obstinately refused to cicatrize in spite of the most earnest efforts of a large number of medical men, who successively undertook the task of inducing it to heal. My diagnosis of epithelioma was quickly made, and in a very few minutes thereafter the ulcerated finger, along with a good full margin of sound tissue, was amputated. The wound healed by the first intention and in a few days the patient was again at work on his farm. For two years after this he enjoyed excellent health in every respect. At the end of that time, however, he returned to me with a tumor in the axilla, the size of an orange. No other evidence of his former trouble could be detected. Without delay I excised the axillary tumor together with everything of the nature of a gland in the axilla, which was laid freely open for the purpose. From this operation the patient made a good but rather slow recovery, complaining a good deal of a feeling of general debility, loss of appetite, et cetera. Still he recovered sufficiently to resume active work. Six months afterward he returned, but now in a perfectly hopeless condition from general infiltration in the axilla, neck, thoracic wall, et cetera, from which he soon died exhausted.

Is it not an assured fact that cases are common in which such irritation as was supplied in this instance by the injudicious use of the pocket knife is all that is required to wake up such an outbreak of malignancy as occurred in the sad and unfortunate experience here detailed?

One more brief case and I have done. I show you here a gold plate with one artificial tooth attached, the whole thing making a combination of curves, hooks and angles extremely unfavorable for passage either upward or downward through the esophagus. A patient of mine, who is a very large, fat, thick-necked man, having forgotten to remove his plate on retiring, was awakened at 2 o'clock in the morning in a state of great distress, having swallowed his plate while asleep. The most careful and thorough examination with the finger failed to locate the foreign body, but the persistent hoarse cough, dyspnea and pain combined to testify to its presence somewhere short of the stomach. Esophagotomy and gastrotomy in a man of my patient's physique seemed very unpleasant procedures to contemplate. Fortunately these contingencies were avoided by the safe delivery of the foreign body by means of the forceps which I here show you. For several days afterward the patient complained of uneasy sensations in swallowing, but these soon disappeared and his recovery was quite complete.

In closing permit me to express the hope that I have not entirely exhausted the patience of my audience, but that in the somewhat varied selection of personal surgical experiences I have furnished at least a little food for thought and material for useful discussion. In one respect, at least, I claim for my paper a slight degree of difference from the great majority of latter-day surgical contributions, namely, the abdominal and pelvic cavities have been carefully avoided.

SOME OF THE USES AND ABUSES OF THE NITRITES.*

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The nitrites are a group of remedies which includes the nitrites of amyl, sodium, potassium and nitro-glycerine, or glonoin, as it is now named in the new pharmacopeia.

They are a somewhat important class of remedies, being prompt in action, but of short duration, demanding their frequent administration to maintain continued effects. In order to have an intelligent understanding of their therapeutic uses it is necessary to know something of their physiologic action, and while clinical experience may be the touchstone which solves the mystery of remedial agents, a good knowledge of pharmaco-dynamics will often restrain or prevent the employment of remedies whose administration would prove prejudicial to recovery.

When taken they cause a sense of cerebral fullness, flushed face, pain in the head, rapid heart-beat, and lowered blood-pressure. The rapidity of the heart beat is due to paralysis of inhibitory branches of the vagus, and to the sudden relaxation of the terminal vessels in front from vaso-motor paralysis. The flushed face is due to the dilated capillaries, and the lowered blood-pressure to the lessened resistance in front. It may be accepted as a fact to which there are few exceptions that when there is very little resistance in front, that is, low blood pressure, the heart endeavors to make up the loss by increasing the number of its contractions, and when we have an agent like the nitrites, which also paralyzes the inhibitory centre, the number of the heart-beats is greatly increased. On the nervous system their action is not so marked, but they take rank as sedatives, or depressants, confined to the motor-tract of the cord. In the blood they transform hemoglobin into methemoglobin, and thus lessen or destroy the oxygen carrying power of the corpuscles. The blood becomes venous and of a chocolate color, with consequent lowering of the body temperature, due to arrest of oxidation and to increased radiation of heat from the dilated capillaries.

I have entered somewhat fully into the physiologic action of this group of remedies, believing that it is impossible to intelligibly administer drugs without having a knowledge of their pharmaco-dynamics, and as "practice without theory is blind," it is just as important to know when not to employ a certain remedy as it is to know when to use it, and sometimes it requires a better acquaintance with the principles of therapeutics.

The diseases in which the nitrites have been found beneficial are those of a spasmodic nature, whether local or general, such as whooping-cough, spasmodic croup, hystero-epilepsy and convulsions of children. In angina pectoris, when due to spasm, they are of great utility. Hystero-epilepsy, and simple hysteria

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* Read before the Detroit Medical and Library Association.

I have frequently relieved by a single dose of glonoin. In interstitial nephritis, the nitrites, especially the glonoin, in combination with digitalis are useful. In this disease we have heightened blood-pressure owing to spasm or constriction of the terminal arterioles, and a hypertrophied left ventricle, a condition of affairs which if not cured is relieved by the nitrites. In croupous pneumonia when the right heart is failing from over-distension the nitrites by dilating the arterioles and causing an equilibrium in the distribution of the blood have sometimes been found of benefit, particularly if employed on the first appearance of the engorgement.

Migraine, when there is a spastic or constricted condition of the cerebral vessels, is sometimes benefited by their administration. Other conditions of acute cerebral anemia are also rapidly relieved by them—such as syncope and anemia-epilepsy. Many other similar conditions which will suggest themselves are greatly benefited by the use of the nitrites. Cardiac dyspnea attended by high arterial tension will be rapidly relieved by their employment. The pain due to aneurismal pressure is sometimes alleviated by them. Generally if they will do good the action is prompt.

Having thus briefly glanced at a few of the indications for the use of this class of remedies I will now refer to their abuse and contra-indications, pathological conditions in which they are sometimes employed, and in which their use is detrimental to recovery. This has been the motive which caused me to write this paper.

Sometime ago, speaking to a somewhat eminent surgeon, he informed me that he considered nitro-glycerine the best remedy he was acquainted with in that condition known as surgical shock. Let us look into this, and ascertain what is the state of affairs which obtains in shock. We find the surface pale and cold, the heart-beat extremely feeble, and often greatly increased in frequency, complete muscular relaxation and depression of all the vital functions. The pale, cold surface is caused by paralysis of the vaso-motor system, and by the recession of the blood to the muscles and abdominal viscera. Now, gentlemen, I ask you in the name of common sense, why should such depressing and paralyzing agents as the nitrites be given, except we believe in the law of similars? Is it a prudent or sensible act to give a remedy whose chief action is to further depress that weak heart, to still more paralyze the vaso-motor system with which the integrity of the circulation and blood-pressure is in such intimate connection? I think not, and I am sure you do also; still, I regret to say that the practice obtains with some, and men, too, who are not tyros in medicine.

During the past year two eminent men have died in this country and the public press informed us that when they were in extremis "nitro-glycerine, a powerful heart-stimulant" was given to brace up the flagging heart and prolong their lives. Let us look into this statement and ascertain what are the distinguishing characteristics of heart-stimulants. We find they cause, (*a*) increase in the number of heart-beats, (*b*) rise in the blood-pressure, (*c*) increase the blood in the cerebral arteries. Do we find such to be the specific action of the nitrites on the circulating system? No, except that the heart-beats are greatly increased, caused by the paralysis of the inhibitory nerve and the dilatation of the peripheral arterial vessels from relaxation of their muscular coats through vaso-motor paralysis. Consequently there is a loss of resistance in front, which immediately results in a great fall in blood-pressure, and a condition is brought about that only serves to intensify the already existing state of cardiac insufficiency and adynamia. If the physiological action of a remedy is to serve as guide for its intelligent administration in disease I am totally at a loss to understand why the nitrites are given in cases of intrinsic cardiac failure. "A perfect circulation" is one which empties the veins and fills the arteries, the very antithesis of the condition produced by the use of the nitrites. I am therefore of the opinion that their usage in cardiac adynamia is one fraught with great danger. In threatened heart-failure from alcoholism, or when it has actually taken place from chloroform or ether I believe their administration to be prejudicial to the patient's recovery, as their dominant action is to weaken the pulse and lower the arterial tension.

There are many other similar pathological conditions to which I might direct your attention, in which the nitrites are sometimes employed, with no benefit but injury, and while I do not wish to pose as an iconoclast, or breaker of idols, my object will be attained if I succeed in directing your attention to the proper use of this group of remedies, and thereby prevent the perpetration of crimes committed in the name of good therapeutics.

WHAT WE KNOW OF THE CEREBRO-SPINAL NERVOUS SYSTEM.*

By J. BYRON NEWMAN, M. D., Detroit, Michigan.

[PUBLISHED IN The Physician and Surgeon EXCLUSIVELY]

THE study of the nervous system has always been a dry and difficult one—one that the medical student seldom cared to prosecute. But if the sthenic condition of the nervous system, in past generations, did not largely engage the attention of the physician and medical student, its asthenic condition, in the present generation, is doing so.

I believe it is admitted by all that nervous and neurotic diseases are on the increase; that through change in the condition of the nervous system the type of diseases has changed; that debility and nervous exhaustion are the condition of the age; that hysteria has spread from the wealthy and idle to the laboring class; that nervous depression and suicide follow the immoderate use of alcohol and tobacco in this class. Since SIR CHARLES BELL announced, eighty-two years ago, that the spinal cord had two functions, there have been many patient and hard workers in nervous departments, trying to unravel it, yet many points remain in obscurity still—points which I would beg to state at the beginning of this paper, I have no presumption this evening to elucidate, my intention being merely to bring the nervous department, *en bloc*, before the society for its reflection and consideration, both at present and hereafter; I leave that task for the light kindled by BELL in the hands of others who will, I have no doubt, by the aid of improved devices and a high standard of physics and biology at their back, more scientifically execute.

No doubt it is very important that every general practitioner should be able to appreciate the significance of ataxia in its different forms, of the different forms of gait, of the different myelo-pathies, encephalo-pathies and neuro-myopathies, but the consideration of these this evening would be alien to my intention, my object being more to take a general survey of the nervous elements and their functions, in order to understand their present condition and biological position. Owing to the multiplication of cities, to dyspeptic nourishments, to the increase of cachexias, to the immoderate use of alcohol and tobacco, and to brain-fag in general, the cerebro-spinal nervous system is suffering a siege in its citadel which threatens to imperil its integrity and ruin its biological position at the head of the animal creation. It has lost its grip, as it were, already, on health and permitted a change in the type of disease from the sthenic to the asthenic, from the trophic to the atrophic.

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* Read before the DETROIT MEDICAL AND LIBRARY ASSOCIATION.

Now, the removal of the above injurious factors, and the restoration of the nervous system to physical and moral health, devolves upon the physician. He not only has to study surgery, the stomach, liver, lungs and nervous system, but he has to educate legislatures in scientific truths—a problem I have no doubt he will find more easily accomplished with the dawn of every succeeding decade, for legislatures are beginning to learn that the educated physician is the wisest man in the state, in everything except, perhaps, political chicanery. But if the physician will not raise his voice against the innovating and vicious laws of legislatures, the most prevalent causes of nervous diseases will remain, sapping the vitality of cortical integrity. But in order to become a minister of health he must study the nervous system and its functions; he must learn the importance of a healthy nerve in the human economy, as well as the significance of the slightest muscular or physical aberration; he must have a general knowledge of the anatomy of its parts and their functions; in fine, he must be able to appreciate the relation of phenomena to structure.

ANATOMY OF THE CEREBRO-SPINAL NERVOUS SYSTEM.

The cerebro-spinal nervous system (which I shall simply call the nervous system) may be divided into two parts, the spinal and the encephalic. Both lying in a bony canal, extend from the second lumbar vertebra to the top of the cranial cavity. At one time the system must have evidently extended downwards to the bottom of the coccygeal cavity. In the three months' fetus it extends to the bottom of the sacral canal; but at birth to the third lumbar vertebra only.

That part in the adult, from the second lumbar vertebra to the sacral canal is called the cauda equina, which consists of long masses of gray matter from the roots of the sacral nerves. From the cauda equina to the bottom of the coccygeal canal lies an atrophied cord containing some cylinder-axis matter; it is the rudiment of the meningeal and ependymal membrane. It forms what is called the central ligament which assists in keeping the spinal cord suspended in its place in the spinal canal. The atrophy at the lower end of the spinal cord, also of the vertebra surrounding this end, would indicate the lapse of a more extended function than that enjoyed at present by man.

The upper end of the nervous system is called the encephalon, which is a proliferation, enlarged, of the spinal cord; and if the lower end indicates atrophy, this, evidently, indicates when undisturbed, a healthy growth, which is evidence that man is growing upward at any rate. The nervous system lies in a bony canal, formed by pieces of bone called vertebræ; those covering the encephalon are loose, it is said, to assist the passage of the fetal head through the pelvis at birth; but the same condition exists in heads of chickens and snakes. It is difficult to say why they should be loose, unless it is to favor the cerebral expansion, but, if this is the object, the privilege is certainly utilized in neither the chicken nor the snake.

STRUCTURE OF THE NERVOUS SYSTEM.

As man has two halves which he uses alternately in locomotion, so he must have two semi-nervous systems, which we find connected by commissural nerve-fibres for coördinate movements. Each half consists of gray matter, cells or ganglia, and white nerve-fibres. In the very centre, between the two halves, is a canal lined by a membrane ependyma, which is open till about six months of fetal life, when it closes, except in the brain, at the site of the ventricles; but sometimes it remains open in the cord, filled with ependymal fluid, causing a disease called hydromyelus; the ventricles of the brain being a continuation of this canal contain naturally ependymal fluid. The gray matter in the cord is in the form of a new moon, having an anterior and a posterior cornu or horn, and a lateral body, hence it is called the crescent; in the brain the matter is called the central ganglia or convolutions, and instead of being internal as in the cord, is external.

WHITE NERVE-FIBRES.

On the external surface of the crescents, run upward four longitudinal columns of white nerves on each side, called, from before backward, the anterior, lateral, posterior, and posterior median; the posterior median is merely a posterior segment of the posterior column, but has some pathological features of its own. All the nerves of these columns are connected with the cerebral cells, either directly or by labyrinthine paths. In the medulla oblongata and in the encephalon, the columns lose their names as well as their forms; in the medulla, fibres from the lateral column joining descending fibres from the cerebrum, form the anterior pyramid; the lateral column is called the lateral tract; fibres from the anterior, lateral and posterior columns of the same side, form the restiform body; and the posterior median column is the posterior pyramid. On leaving the medulla, these fibres pass to the cerebrum, some directly and the others through the cerebellum, pons Varolii and other basilar ganglia, or, directly upward, through the pons to the central ganglia, forming cruri or peduncles on their way which connect the different ganglia.

On each side of the encephalon are the corpus striatum, optic thalamus, lateral ventricle and cerebral ganglion. The former two ganglia, with the last ganglion are called the central ganglia. In the median line of the base of the encephalon are the corpus callosum, septum lucidum, fornix, pineal gland, pituitary body, optic commissure and third ventricle. The encephalon consists principally of basilar ganglia and the cerebrum. Of the basilar ganglia, the cerebellum is the largest; it, as well as the other ganglia, consists of two hemispheres, connected by a middle lobe or peduncle. All the basilar ganglia have a rudimentary appearance. The cerebrum consists of two halves, each half of three lobes, and each lobe of convolutions, and each convolution principally of gray cells or matter.

The cortex of the brain is connected by fine fibres to nerve-roots in the ganglia. Also by descending motor fibres to the nuclei of the facial nerves. These fibres decussate at the lower part of the pons; lower down more fibres are thrown off from the anterior pyramid to join fibres from the opposite lateral column; these descend to the opposite lateral gray crescent. The decussation takes place at the lower part of the medulla. The sensory nerves from each side decussate as soon as they enter the spinal cord, after passing through the roots, and then pass upward, the opposite sides to the cerebral cells occupying on their way upward the posterior part of each internal capsule. A decussation in the optic commissure makes four altogether in the nervous axis.

The brain is affected by external pressure or cold applications through foramina, diploë, blood-vessels, nerves; and if the pressure should be excessive, there is a compensating provision provided in the ventricles.

The eyes and all the nerves of the nervous system are parts of either the brain or spinal cord protruded—proliferations of cells—and they are covered by the dura and pia mater which form the neurilemmæ for the nerves and conjunctivæ for the eyes. The nervous system is also interspersed by blood-vessels and connective tissue (called by Virchow neuroglear tissue) which play an important rôle in paretic and amyelotrophic diseases.

FUNCTION OF THE NERVOUS SYSTEM.

The function of the nervous system may be said to be motor and sensific or sensory. Motion is dependent upon sensation and sensation upon the senses. The posterior spinal nerve-roots and multipolar crescentic gray cells are sensific, originating sensations which are transmitted reflexly, transversely or longitudinally through the postero-lateral sensiferous afferent or centripetal nerves to the cerebral cells of the convolutions, which being more largely sensific, on receiving the sensation, will be stimulated to originate perception and the motory force, or inhibition, as required—the quality of perception, always depending on the quality of the sensation. Neither the area of the sensific cells in the convolutions, nor the manner in which they are connected with motor cerebral cells is known at present.

The motor area of cerebral cells, as established by Hughlings Jackson and Ferrier, is in the ascending parietal convolution and its backward continuation; ascending frontal convolution; back part of the three frontal convolutions and close to the longitudinal fissure in the Rolandic neighborhood. The cells of this area are connected with the roots of the cranial nerves by short fibres, and with the anterior roots of the spinal nerves by motor, afferent, or centrifugal nerves and crescentic cells, thus forming a motor-path from the cerebral cells through the internal capsule, anterior pyramids, columns and cornua in the front part of the cord to better assist leverage in progression. The decussations at the lower part of the medulla, together with the transverse commissural crescentic decussations enable man to swing either half of his body, alternately, as well as to balance it in locomotion. The pyramids are the pyramids of the body; if they should be feeble the body will totter. The number of fibres decussating from the pyramids with the lateral fibres varies. Brown-Sequard cites several cases in which the lesion and the paralysis were on the same side. Once in ten thousand cases there is no decussation, yet the man progresses. Association of movements occurs when there is no decussation, even with it, associated movements sometimes occur, as exemplified by pandiculation or morning stretching—no doubt owing to the predisposition of the bilateral nerve-roots of the cord, together with nerves of association of the cerebrum connecting different parts. The roots are not so close, however, as to exclude inhibition, as shown by the horse stretching one leg only in the morning. Some animals progress constantly by associated movements, as the hopping frog, notwithstanding the fact that nerves decussate in him. Any paretic weakness will favor associated movements by lessening inhibition.

The lateral columns, tracts and restiform bodies, are composed of both motor and sensory nerves—mixed nerves—affections of which cause spastic paraplegia. In animals having no brain the spinal cord terminates in a small ganglion.

PARALYSIS.

If the function of a nerve be destroyed there will be paralysis. Nerves ascend the motor-tract to the cerebrum, but volition or motor sensation descends these same nerves. If there should be a destructive lesion in the tract, so as to interrupt completely the sensation, there will be paralysis below the lesion; if the sensation should be interrupted above the lower part of the medulla it will not cross over to the opposite half of the cord, where there will consequently be paralysis; if this lesion should involve the descending cerebro-facial motor nerves at the final nerve-root, or in the bulbo-paretic region, it cannot cross to the face, either, where there will be paralysis also, thus causing cross or alternate paralysis of motion. The posterior nerves with sensations ascend to the cerebral cells together, but before ascending they decussate on entering the spinal cord, so that a lesion in either the right or left half of the cord, will deprive the opposite side of the sensation, where, consequently there will be paralysis of sensation, while there will be paralysis of motion on the side of the lesion, thus causing **Brown-Sequard's** cross motor and sensory paralysis. **Osler**, in describing syringomyelia, thinks that the sensations of heat, cold and pain—thermic and algiac sensation—ascend through the posterior, crescentic multipolar cells, as these sensations are absent in that disease, while the tactile and muscular are perfect. He thinks the muscular sensations do not decussate. Notwithstanding extensive experiments on cats and monkeys by **Horsely**, **Gowers**, **Turner** and **C. D. Marshall**, the sensory tracts in the cord still remain partly unsettled.

Paralysis of sensation can always be diagnosed by making a figure on the part, unseen by the patient, and asking him to name it, neither four nor five being used, as these have a break in making them.

FUNCTION OF THE ENCEPHALON.

At the same time that the cells of the central ganglia originate motor sensations, they originate other sensations, as perceptions, intellections, emotions and volitions. The function of the encephalon varies with the part or centre. We cannot believe in **Lock's** theory, namely, that the brain of the newly-born infant is like a sheet of white paper, destitute of all ideas. I am inclined to think that **Gall** and **Spurzeim** were nearer the truth, when they assigned different centres to different faculties; but they were only right in the general principles. They placed the genital centre in the cerebellum, whereas, now some place it in the cauda equina. The cerebellum even, as well as the other basilar ganglia, has a rudimentary appearance. Its function may be organic only, but in animals having no cerebrum, the cerebellum, perhaps, was and is the seat of animal instinct. The snake has only the rudiment of the middle lobe of the cerebellum, and it has instinct enough. The other basilar ganglia are organic and coördinators at present, whatever they were in other forms. SPITZSKA intimates the pineal gland is an atrophied eye of some ancient cetacean, which is in accordance with DARWIN's theory of general atrophy that wings and arms are only the rudiments of legs, hence the basilar ganglia may be rudimental, and, in a class with the appendix vermiformis, and the sacral and coccygeal parts. After all the genital centre may be local, and its excitation depending upon the desire of the matured spermatozoa or ova to escape. It might be asked in what part of the spermatozoon, that jumps across the pelvis through the peritoneal cavity to enter the opposite ovum, is the genital centre located?

In man all other animal and emotional instincts are in the cerebral convolutions, posterior to the central or ROLANDIC fissure. Those instincts in the basilar convolutions, near the animal body as it were, are the basest part of man, but at the same time the most active; they set the motive for the intellect to accomplish. The higher we ascend from the base of the cerebrum, in the convolutions, the more complex, refined and noble becomes the function, but at the same time, the less active. The regional power of the instincts, emotions and sentiments, will be indicated by the external configuration of the head. That part of the cerebrum in front of the fissure of ROLANDO is the centre for intellection. Intellect is divided into conception and reflection. Conception deals with the concrete, and reflection with the abstract. That the whole brain is divided into different centres, and that the power of each depends upon the mass of gray cells and nerve-texture in it, but that they are all connected and subject more or less to any irritation, is a proposition that the light kindled by BELL eighty-two years ago, will sooner or later establish the light of multiple function.

BRAIN CAPACITY FOR EDUCATION.

According to expert reports to the Royal Society of England and to asylums in general, that the intellectual power of animals is in proportion to the depth of the convolutions and consequently to the quantity of gray matter in them, it is observed that gray matter is essential for nerve-power. Wherever extra nerve-power is required, there will be found always extra masses of gray cells, as in the sacral, lumbar, cervical and cerebral enlargements, where extra functions are required for motions and intellection; also in the upper part of the medulla and at the roots of large nerves. The same condition holds good in animals; the torpedo-fish has a battery of gray cells on each side of his head, which, on completing the circuit, will paralyze a man's arm. It is observed that the convolutions of a child between one and two years, are flat, and that the sulci are shallow; that between thirty and forty years of age the convolutions reach their greatest depth and specific gravity; that after this age they lose in weight one ounce for every decade, until between eighty and ninety they reach the condition of those of the child. The average weight of the whole encephalon, at the above ages respectively, is twenty-nine ounces, forty-five ounces and thirty-nine ounces. The nerve-power and intellectual capacity grow and decline proportionally, and any attempt to force education prematurely will only lead to exhaustion and atrophy; on the other hand, well regulated exercise and the study of the concrete before that of the abstract, will stimulate and strengthen them, and tend to obviate the reaction of debility upon the younger generation, which generation, being congenitally enfeebled, and consequently prone to nervous irritability and depression, is not in the best condition to mature and graduate six or seven years earlier than formerly. "It is the pace that may kill," especially the feeble horse.

Now, this nervous strain in education, this overtaxing of nervous cells, coupled with excessive indulgence in alcohol, tobacco, opium, venery, hydrocarbonaceous or acid-producing food-stuffs will be certain to multiply degenerative reaction in the younger generations, destroy procreation and produce physical and mental mortality; wherefore I repeat again, the nervous system is in danger in its citadel and calls for the removal of its enemies.

EXCISION OF THE HIP-JOINT.*

By C. C. TAYLOR, M. D., Kalamazoo, Michigan.

[Published in The Physician and Surgeon exclusively]

I SHALL very briefly present today this case of excision of the hip-joint, showing you the portion of the bone removed, and the little patient as she now appears, eight or ten months after the operation.

This girl, now thirteen years of age, first showed symptoms of morbus coxarius at nine years of age. I have been unable to trace the disease to any exciting cause. There is no history of any fall or injury. The family history is good.

I first saw the patient about the first of January, 1892. She then weighed about thirty pounds. There were three openings into the joint, from all of which great quantities of pus were discharged. It seemed to me at that time as though it were more a question of saving the child's life than of doing anything toward a radical cure. She had been wearing a short splint. I ordered her put to bed, applied mild counter-extension, had openings syringed out twice daily with a bichloride solution and prescribed cod-liver oil and iron freely. I hoped to improve her condition sufficiently to feel a degree of safety in operating. This sort of treatment was continued for about eight months, under which she gained about ten pounds in weight; but several new openings appeared, and there was a free flow of pus from the vagina, two openings occurring on the perineum, one in the groin, one to the left of the lumbar spine, and one in the left inguinal region. I felt that I would not be justified in waiting longer to operate, although the patient was in no condition to stand such an operation. Therefore, in October, assisted by Drs. Rockwell and Myers, under thorough antiseptic precautions, I exposed the joint, not knowing what I should find or what I should do.

An incision was made exactly half way between the anterior superior spine of the ilium and the tip of the major trochanter, along the neck of the femur, then curving it slightly forward and extending down the upper third of the shaft, all the time keeping the scalpel pressed well down to the bone. After once getting down to the bone it was found not to be a question of what should be removed so much as whether anything could be left. The whole upper third of the femur, all the acetabulum, the external surface or dorsum of the ilium, and the external surface of the ischium were literally rotten. The bone could be cut through anywhere with the scalpel. The soft parts, as a result of the inflammatory process, were as firm and unyielding as wire network. It required the greatest efforts and patience to separate them from the bone. Finally the joint was disarticulated and the femur sawed off about five inches down the shaft; but the interior of the bone was found so diseased that three or four inches more were removed, leaving such portions of the periosteum as were healthy. The process of chiseling out the diseased bone from the pelvis was tedious in the extreme, probably a hundred pieces being removed. After all were removed that seemed possible, the cavity was thoroughly and repeatedly irrigated with a hot bichloride solution, and every portion thoroughly packed with antiseptic gauze, dressed, and not touched for a week. The wound was kept packed and open for months, indeed, it has not been allowed to close until within the past two months, and not until suppuration had ceased for six weeks at least.

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* Read before the Kalamazoo Academy of Medicine.

You will observe when I present the patient how little shortening exists comparatively. There were three inches of shortening before the operation, and about eight inches of the bone were removed, and we now have only two or three inches shortening, which is growing less all the time. We are getting a good artificial joint, with good rotary motion. I have not allowed much motion to the joint yet, and the patient now wears the short splint only to keep the joint passive. In my opinion she is going to have a good, strong, useful leg.

There is one lesson to be learned from these cases. I have myself learned it thoroughly from this and three other similar ones, and that is, "Do not procrastinate" in surgical measures. I think, today, that never again in a case of hip-joint disease will I delay longer than a month after a suppurating opening appears, before I at least make an exploratory incision and see what I have there. Nothing can be lost by such a procedure and at least something is to be gained.

LECTURES.

NEURITIS OF THE MEDIAN NERVE.

By HAROLD N. MOYER, M. D., Chicago, Illinois.
NEUROLOGIST TO COOK COUNTY HOSPITAL; ADJUNCT PROFESSOR OF MEDICINE IN RUSH MEDICAL COLLEGE.

Gentlemen: This man was referred by a surgeon for our opinion as to the advisability of an operation for the restoration of the nerve supply of the right hand. Some three months ago he received a cut on the inner side of the wrist, the scar of which still remains. He resorted to some domestic applications, and as a consequence the wound became infected, an acute cellulitis was set up, and to relieve tension several incisions were made, one in the palm of the hand and two on the forearm.

The thumb, index, middle and adjacent sides of the ring fingers show almost complete anesthesia of touch and temperature, both on the palmar and dorsal surface. There are no trophic disturbances, such as would be shown by glossy skin, loss of nails, et cetera. The electrical reactions of the interossei and muscles of the thumb and little finger are normal to both faradic and galvanic currents. There is considerable loss of power of flexion of the fingers, amounting to about one-half as compared with the left hand. The patient complains of no pain but only of numbness in the anesthetic area.

The questions naturally presenting themselves in this case are: (1) Was the nerve divided? (2) Is there pressure of a cicatrix upon the nerve? (3) Is it a case of peripheral neuritis? It is apparent that a correct answer of these questions will determine whether surgical interference is warranted at this time. On questioning him closely we learn that the anesthesia was not noticed *immediately* after the incisions were made, but came on some time later, and at no time was there a complete loss of motion. These points are sufficient, we think, to exclude an immediate division of the nerve. Pressure from a cicatrix is, we think, excluded by the fact that sensation is impaired to a greater degree than motion, contrary to the rule observed in cases of pressure paralysis in which, while sensation is the first disturbed, yet motion is the last to be restored. We confess that the problem is a difficult one, yet the greater probability is in favor of a peripheral neuritis, particularly as the condition for which these incisions were made was an infectious cellulitis which might readily extend to the sheath of the nerve.

We shall, therefore, recommend that no surgical operation be undertaken, but the treatment appropriate for peripheral neutritis be employed.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, SEPTEMBER 4, 1893.

THE PRESIDENT, FREDERICK W. MANN, M. D., IN THE CHAIR.

REPORTS OF CASES.

DR. J. FLINTERMANN reported a case of morphine poisoning as follows: I was called to see a patient suffering from dysentery. After seeing and examining him I prescribed one-tenth of a grain of opium and two grains of quinine to be given every two hours. Next day I found my patient comatose—in a profound morphine stupor. I at once instituted measures for restoring the patient, such as constant walking, strong coffee, stimulants, Hoffmann's anodyne, et cetera. Upon investigation I found that the druggist had dispensed morphine instead of quinine, and my patient had received twenty grains of morphine and one and eight-tenths grains of opium, all of which he had swallowed. He finally recovered after we had worked over him many hours. The patient did not vomit at all.

DR. C. W. HITCHCOCK: The case reported by DR. FLINTERMANN recalls one to my mind over which DR. CHAPOTON and myself worked for many hours unsuccessfully. In our case the patient swallowed something in the neighborhood of eighteen grains of morphine. We employed physical violence, flagellation with a bundle of switches, and various stimulants, but to no purpose, as the patient died in spite of our efforts. He was a broken-down and dissipated man.

Dr. Bonning: The amount of morphine and opium swallowed by **Dr. Flintermann**'s case is remarkable if the man was not a morphine inebriate.

Don. M. Campbell, M. D., Secretary.

STATED MEETING, SEPTEMBER 18, 1893.

The President, FREDERICK W. MANN, M. D., in the Chair.

DISCUSSION OF PAPERS.

Dr. Preston M. Hickey read a paper entitled "Photography in its Relation to Medicine." (See October issue of The Physician and Surgeon.)

Dr. Walter P. Manton: The army medical officers have done a great deal of very fine work in medical photography. The wet process brings out the outlines of cellular elements better than the dry process, although the latter is much more convenient. There is not a doubt but it is better to study from micro-photographs of pathological tissues than from diagramatic drawings of the same, because the former gives you a much truer idea of the actual conditions present. They are of great value in the teaching of students, especially when used in connection with the actual specimens. The text-book illustrations are usually diagrammatic and unreliable. Photographs of the vagina and os uteri, as found in some magazines, are utterly worthless, there not being brilliant enough illumination to take a good photograph of the parts. Medical photography has its best application in external diseases, especially diseases of the skin.

Dr. E. T. Tappey: I am glad there is a physician in the city who can do this kind of work, for it is only a physician who has enough appreciation of what is needed to do it properly.

Dr. W. S. Anderson: I want to compliment **Dr. Hickey** for his very good work in this department. I remember some of the first photographs which were taken of the larynx, and I can see a great improvement in those taken now.

Dr. J. H. Carstens: This is an important subject—very useful in medicine and surgery. A medical man can do the work best.

Dr. Hickey: It is a pleasant and profitable way to spend time.

Don M. Campbell, M. D., Secretary.

STATED MEETING, SEPTEMBER 11, 1893.

The President, FREDERICK W. MANN, M. D., in the Chair.

PATHOLOGICAL SPECIMENS.

Dr. Theo. A. McGraw exhibited a specimen showing an intestinal anastomosis made by a new method, which has for its object the making of a union in such a way as to prevent subsequent contraction of the lumen of the bowel at that point. The patient had no rise of temperature and the anastomosis was a success, but the post-mortem examination revealed another obstruction at another point from which the patient died.

Dr. H. W. Longyear: I would like to have **Dr. McGraw** describe minutely his method of procedure.

Dr. Theo. A. McGraw: The great drawback to all these anastomoses is that the opening will afterward close up by concentric cicatricial contraction. These flaps are made in such a manner as to bring the two serous surfaces together, and thus you have a wound not lined by a painful raw surface but by mucous membrane. It is done somewhat after the same fashion as the operation for webbed fingers.

DISCUSSION OF PAPERS.

Dr. James Newell read a paper entitled "Some of the Uses and Abuses of the Nitrites." (See page 486).

Dr. J. J. Mulheron: I am perhaps not in a position to intelligently discuss this paper. I have used nitrite of amyl as a diagnostic agent in cases of severe migraine. This migraine is somewhat of an epileptiform affection due to a spasm of the arterioles, and if the patient is quickly relieved by a few whifs of nitrite of amyl, cannabis indica will permanently relieve the affection. In rigid os uteri I have used a few drops to produce relaxation, although I am perfectly aware that by some it is considered a dangerous remedy, predisposing the patient to post-partum hemorrhage. In angina pectoris, the nitrite of amyl pearls I have found convenient and efficient. I cannot agree with **Dr. Newell** in his statement relative to shock. I have often used nitro-glycerine in cases of great depression, and I believe that it acts by dilating the superficial capillaries and reducing the amount of force necessary to drive the blood through its circuit, thus relieving the overburdened heart. The two cases which are cited by **Dr. Newell** are not fair ones, as they would have died in any case.

Dr. Theo. A. McGraw: I differ very widely from **Dr. Newell** in his remarks. The difficulty with all therapeutics founded upon physiological experiment alone is that physiology itself is a very complicated and uncertain science. We all can recollect positive assertions which have been made by these laboratory workers and the agent put aside very quickly. The different nitrites have different physiological actions. Nitrite of amyl and nitro-glycerine are two very different remedies. It is very difficult for any laboratory experiments to convince me that nitro-glycerine is not a good remedy to give in cases of shock, when I have had men who were fast sinking to death brought back, their heart stimulated, and kept alive by the hypodermic injection of nitro-glycerine. The same is true of the great depression of septic infection. The combination which I have found the most efficient is one-hundredth grain of nitro-glycerine, one-hundredth grain of digitaline and one-fiftieth grain of strychnine. I protest against the interference of any physiological investigators, unless their conclusions and assertions are backed up by clinical experience.

Dr. Newell: In migraine I have used nitro-glycerine and also amyl nitrite, but seldom do they seem of any benefit. I never have used the remedy in rigid os. The nitrites differ chiefly in degrees; nitrite of amyl being more easily broken up and more quickly diffusible, acts more promptly and with greater force. There is no questioning the assertion that clinical experience is of vast importance, but it does not furnish all we want to know. When, how, and where do these remedies act? Intelligent medicine demands physiological knowledge as well as clinical experience. Physiological action is the key to the therapeutical application of drugs. DR. MCGRAW speaks of the good effects of nitro-glycerine in shock. In my opinion it is the combination of remedies which he uses which does the most good, not the individual action of the nitro-glycerine.

DON M. CAMPBELL, M. D., Secretary.

EDITORIAL ARTICLES.

THE URINE AND ANESTHESIA.

THE comparative safety of anesthetics is a matter so generally answered solely in the light of individual experience, that any rules are to be sought after that will lift the question out of purely empirical estimates. For this reason the original and lucid presentation of ideas upon this subject recently made by DR. WILLIAM H. PORTER before the Clinical Society of the Post-Graduate School in New York are deserving of special attention.

Ether and chloroform act by slightly different methods in producing anesthesia. Both withdraw oxygen from the body, thus lessening the activity of the medullary centers dependent upon a supply of oxygenated blood. This shutting off of the thermogenetic element of the blood is the chief factor in producing the anesthetic state. In this condition the peripheral irritation of centipetal nerves dependent upon heat production in the oxidation of food-products is suspended, and the patient is only aroused out of this state by restoring a needful amount of oxygen to the blood to produce oxidation. Anesthesia is therefore a coincident condition to sub-oxidation. As a consequence of this the oxidation of proteid material is arrested. Products of tissue metamorphosis are at first decreased, and are then incompletely formed. These latter formations may be toxemic in character.

The volatility of ether is apt to cause delay in the process of sub-oxidation and in the anesthesia it produces. It is readily inflammable and is consequently itself oxidized in the epithelial structures of the respiratory passages and this rapid oxidation in the air passages aids in shutting off oxygen. Its combustion in the lungs with the production of free ammonia also irritates the peripheral respiratory nerves. The reflex action of these nerves is exhausted by this rapid and continuous production of heat and these nerves cease to be factors in keeping the medullary centres in motion. The heart and respiration are first to fail in the poisonous effects of ether narcosis.

Chloroform is less volatile than ether, it quickly fills the air cavities, and very much less than of ether is necessary to produce anesthesia. Not being oxidizable in the respiratory chambers, the system can be deprived of oxygen without such expenditure of internal oxygen as occurs with ether. No extra heat is generated to irritate the central nervous system or prolong sub-oxidation by efforts on the part of internal glands. Its retention, however, may occur in the respiratory chambers, and failure of heart and respiration may come suddenly from the crowding of the vapour. Sudden death may, therefore, more often ensue from the administration of chloroform, and death after an interval more often ensue after ether.

The prolongation and intensification of the sub-oxidation period being more manifest in other than in chloroform narcosis it follows that while both agents are harmless in the normal physiological state, it is to be inferred that in certain pathological conditions of the organization one or the other is the preferable agent.

It is in this relation that the urine affords useful indications. In conditions where the urine is of high specific gravity from any cause other than an excess of urea the indication is that an imperfect oxidation of the proteid molecule exists. Urea is the natural by-product of organic oxidation. If uric acid or albumin be present impaired nutrition is indicated; if bile coloring matter be present a general retrograde change in the glandular organs and tissues of the body is indicated, and ether anesthesia when followed by operative interference is likely to terminate fatally. The prolongation of the sub-oxidation period is particularly to be avoided.

The progress of abdominal surgery has been marked by an increasing number of cases in which some hours after anesthesia death with symptoms which are designated septic occur. The symptoms are not dependent upon any septic complications in the wound, but may arise from the damaging effect upon the system of an anesthetic which has shut off the oxygen and arrested glandular action. This has been followed by rapid retrograde changes in the epithelial cells of the glands, with a retention of excretory products in the system.

In the few cases in which cardiac insufficiency might make crowding in the air cavities by chloroform vapour a positive danger, ether would be a preferable anesthetic.

The importance of urine-tests is one that should enforce their application in all cases in which the production of anesthesia is premeditated.

EDITORIAL BREVITIES.

CONSUMPTION A CONTAGIOUS DISEASE.

The State Board of Health has passed a resolution whereby consumption and diseases due to the bacillus tuberculosis are included in the official list of diseases dangerous to the public health. The object of the resolution appears to be a fairly reasonable one, that of giving the authorities the location of each case of this "most dangerous disease." That consumption is a communicable disease in the sense that it is innoculable is universally admitted by scientific men; that it is a contagious disease in the clinical sense is not, however, so generally conceded. To stigmatize every sufferer with phthisis, or tubercular arthritis, or tubercular meningitis, as dangerous to the community in which he dwells, would be an aggravation to the sufferer, without compensating advantage to the public. Between the clinically contagious and the simply innoculable there is some difference, and the sufferer is entitled to any advantage arising out of it. The State Board, however, appear to have no intention of isolating the patient, and probably intend the regulation simply as a means of informing themselves as to the prevalence of this disease. Instruction regarding the proper disposition of the sputa of tuberculous patients might profitably be imparted, and municipal authorities should be rigidly compelled to prevent the consumption of tuberculous meat and milk.

DANGEROUS PSYCHOSES.

The recent murder of **Carter Harrison** calls attention to the indifference so frequently exhibited to the threats and fulminations of cranks and fanatics. There are undoubtedly a large number of dangerous individuals at large over whom some measure of restraint should be exercised. That the governor of this state has been sufficiently well-advised to recognize kleptomania as a justification of executive clemency, is encouraging to those who hope for a better recognition of brain diseases than has hitherto prevailed in our courts. Paranoics and cranks are everywhere present, and their actions should receive some sort of surveillance, where detention is not necessary.

MEDICAL NEWS.

The New York Pasteur institute was opened October 9.

Spokane, Washington, has a new hospital for contagious diseases.

Over five hundred cases of yellow fever have raged in Brunswick, Georgia.

There were eight hundred and ninety-eight deaths in California during October.

Nashua, New Hampshire, has a new emergency hospital. It was dedicated October 10.

Bellevue Hospital has been enriched ten thousand dollars by the will of Mrs. Mary T. March.

A new building for the Kansas Medical College has been ordered by the trustees of that institution.

The yellow fever epidemic at Brunswick is declining, but about twelve new cases daily are still observed.

Kyphosis bicyclistarum is the term applied to the confirmed stoop which is manifest in many wheelmen.

The Saint Louis Protestant Hospital Training School for Nurses, graduated a class of four on October 31.

The skull of Socrates has been discovered by some antiquarian in Greece, and will be examined by Virchow.

Dr. J. C. Culbertson, of the *Lancet–Clinic*, has been sued for fifty thousand dollars by "Dr." R. W. Amick.

The late Professor Olivieri, of Naples, Italy, bequeathed one million dollars to two of the hospitals of that city.

One of the founders of *L' Union Médicale*, Gustave Antoine Richelot, died recently at the age of eighty-seven years.

The New York Hospital will receive about two hundred thousand dollars through the will of the late Charles B. Beck.

Dr. Kerlin, medical superintendent of the Pennsylvania Training School for Feeble Minded children, died on the 22d ultimo.

DR. LESTER E. KEELEY has discontinued his suit for libel against the *Lancet*. The costs of the action will be paid by the plaintiff.

THE American Medical Association will meet at San Francisco on the first Tuesday in June, 1894, instead of the first Tuesday in May.

A NEW hospital building that will cost twenty thousand dollars is to be erected at Rhinelander, Wisconsin, by the Sisters of Charity.

PEDRO ERELLO died recently at Tarimors, Mexico, aged one hundred and thirty-three years. He left four hundred living descendants.

THE New York Throat and Nose Hospital has been incorporated. Nine members constitute its board of managers, two of whom are physicians.

DR. W. A. HOLDEN, of New York, has been awarded the Cartwright prize of four hundred dollars for a thesis upon the "Embryology of the Eye."

THERE were eighteen thousand five hundred cases treated at the World's Fair Emergency Hospital. Twenty-three deaths occurred at the institution.

LIEUTENANT-COLONEL H. R. TILTON, deputy surgeon-general, has been relieved from duty at Fort Wayne, Detroit, and transferred to Fort Omaha, Nebraska.

THE physician to the Empress of Germany receives three hundred and fifty dollars a day when ministering to the physical ailments of his imperial patient.

IN Austria, China and Sweden doctors' bills are regarded as debts of honor. They are therefore relegated to the category of gambling debts in the United States.

THROUGH the liberality of the last legislature the hospital for the insane at Middleton, Connecticut, will have an annex to cost one hundred thousand dollars.

TYPHOID FEVER.—Nearly one-third of the counties in Tennessee—twenty-eight in number—report the prevalence of typhoid fever during the month of September.

IN every vocation except the practice of medicine fees have been doubled during the past twenty-five years. Why should the physician's stipend remain stationary?

THE eighth International Congress of Hygiene and Demography will convene at Budapast in 1894—August or September—under the patronage of the Emperor of Austria.

DR. AUGUSTUS H. SALISBURY, first health commissioner of Minneapolis, died in that city recently, aged fifty-three years. He had practiced there nearly twenty years.

MALAKIN, a derivative of salicylic acid and phenacetin, is a new candidate for therapeutic favor. It makes its debut in the rôle of an antiseptic, antipyretic, and antineuralgic.

PROFESSOR FRAENKEL, of Berlin, has announced the discovery of the typhus bacillus. Immune experiments have been made by the Professor in which its employment was successful.

FRANCE is the scene of about eight hundred and fifty thousand deaths yearly, and it is stated that over one hundred and forty thousand of these demises are caused by pulmonary phthisis.

A DENTAL college has been organized at Tacoma, Washington. The faculty embraces nine professors and four special lecturers, and the curriculum will be adjusted to a three years' course.

GERMANY is experimenting with a flour made from peanuts. Nordlinger pronounces it the cheapest food in existence. It is very nutritious, containing nearly fifty per cent. of albumen.

THE Richmond City Hospital has been purchased by the College of Physicians and Surgeons of that city, for eighteen thousand four hundred and eighty-nine dollars and thirty-nine cents.

IT is estimated that a modern medical college plant, with facilities for imparting instruction to four hundred matriculates, would require an outlay of one hundred and fifty thousand dollars.

DR. LEVI C. LANE, of San Francisco, has generously donated sufficient money for the erection of a large hospital to be conducted under the auspices of the Cooper Medical College of that city.

THE new retreat for epileptics, located at Galliopolis, Ohio, has been declared open by Governor McKinley. The trustees announce that they can accommodate two hundred and fifty male patients.

MÜTTER LECTURES.—Dr. De Forest Willard will deliver the Mütter lectures this year. The subject is the "Surgical Pathology and Surgery of the Spinal Cord, the Vertebræ and Peripheral Nerves."

THE first post-mortem recorded in this country was performed by Surgeon Rossiter, of Hartford, Connecticut, March 11, 1662. He received twenty pounds for opening the belly of John Kelley's child.

PHYSICIANS in Yew York attached to any hospital can, by a recent ruling, give their testimony in any case of a patient of the institution before a referee, thus avoiding loss of time in attending court.

THE New Jersey State Board of Medical Examiners have examined one hundred and fifty applicants during the fiscal year just closed, and granted one hundred and fifteen certificates to practice medicine in that state.

RUSSIA contains one physician for each twelve thousand of its population. There are twelve thousand male and four hundred female physicians in that country. Two thousand five hundred of the former are in the army.

HOSPITAL ABUSE.—Mr. Herbert Spencer says thirty per cent. of people in London are frequenters of hospitals and dispensaries, so that the largeness of this proportion makes it clear most of them are able to pay their doctors.

THE unification of the several medical college faculties of Cincinnati for the purpose of forming a medical department, to be conducted under the auspices of the Cincinnati University, is a project that is being seriously considered by a committee appointed to represent the various institutions interested.

Dr. Eugene Smith, of Detroit, has disposed of his Athol Springs Hotel and the Spring House, located about thirteen miles from Buffalo, to the Fresh Air Mission of that city, who will convert it into an infants' hospital for summer use.

A prize of four thousand francs, eight hundred dollars, is offered by the Belgian Academy of Medicine for the best essay upon the pathology and treatment of epilepsy. Competitive papers must be presented before February 1, 1894.

Keeley has withdrawn his libel suits against the *Lancet* and *Medical Press and Circular*. The defense had accumulated a large amount of material tending to disprove Keeley's pretensions, some of which will eventually be given to the public.

Damascus has nearly two hundred thousand population and is without a hospital. A dispensary has existed there since 1887, and it is now proposed to erect a hospital to accommodate sixty patients, at a cost of twenty-five thousand dollars.

The Alvarenga Prize.—The next award of the Alvarenga prize will be July 14, 1894. Essays intended for competition will be received by the secretary of the College of Physicians, of Philadelphia, Dr. C. W. Dulles, on or before May 1, 1894.

What it Costs.—It costs the people of the United States twenty-five million dollars a year to be born, three hundred million dollars a year to be married, seventy-five million dollars to be buried, and nine hundred million dollars to get drunk.

Dr. Pozzi, the celebrated French gynecologist, passed through this country on his way to and from the World's Fair. He was the guest of Dr. D. P. Allen, of Cleveland, and performed, while in that city, an unusually difficult celiotomy.

The John Pyne March Memorial Hospital will be the name of a new one-million-dollar institution soon to be erected in New York from the bequest of Mrs. Mary T. March. It will be dedicated to the relief of the sick, aged and indigent of Grace church parish.

The Clinique of Saint Louis, has a new man at the helm. Dr. George Wagner assumes editorial control *vice* Dr. William Porter, who has resigned because of pressure of private duties. This coupling gives us a Wagner service without the customary Porter.

The Norwegian Medical Congress which recently convened at Christiania, continued its sessions on a large steamer which moved from place to place. This new departure gave change of scene as well as change of subject. The example is commended to our state society.

According to recent estimates San Francisco has three hundred and twenty-five thousand inhabitants and an assessed wealth of three hundred millions. In view of this showing the *Pacific Medical Journal* thinks the city ought to have a health department consisting of more than one medical man and six inspectors, and brands this present equipment as niggardly.

The Philadelphia County Medical Society has adopted resolutions commendatory of the position assumed by Dr. J. E. Reeves in relation to the Amick cure, and the *Medical News* recommends that every medical society in the United States indorse his action in similar manner.

Tonsorial Antisepsis.—The barbers and hair-dressers of the Republic of Colombia are required to disinfect the instruments of their art every time they have been used. The government having in view the possibility of contagion, enacted a law recently making this precaution compulsory.

The Ingersoll estate has divided a residue of four hundred and seventy-six thousand, five hundred and seventy-four dollars and sixty-seven cents between the Episcopal Hospital, the Children's Hospital, and Consumptive's Home, all of Philadelphia, each institution receiving a third of the amount.

Hospital Endowment.—The will of the late Charles B. Beck gives about nine hundred thousand dollars each to the New York Hospital and the Presbyterian Hospital. Neither institution is particularly in need of funds, and do not contribute largely to medical education, as neither is attached to any school.

Dr. Robert Battey, of Rome, Georgia, has presented to that state about one thousand valuable medical works selected from his private library, asking that they be made the nucleus of a medical reference library in the capitol at Atlanta. This is an example worthy of emulation by members of the profession in other states.

The Board of Health of San Francisco are considering favorably a suggestion to employ a competent microscopist to aid in properly diagnosing cases reported to be diphtheria by means of bacteriological examination. This measure will enable the profession of that city to shift the responsibility of positive diagnosis upon a public official.

In Paris the anatomic remains of the hospitals and dissecting rooms are disposed of by cremation. There have been one hundred and eleven thousand eight hundred and fifty-two incinerations of anatomic remains at Pére Lachaise during the past four years. About twenty-seven thousand persons are represented in this number.

Dr. A. S. Johnson, of Battle Creek, recently had his office entered by thieves who relieved the safe of three hundred dollars in money and three hundred dollars in certificates of deposit. The robbery was effected while the doctor was at his midday meal, and although the office is in the center of the city, in the rear of a drug store, the perpetrators were not detected.

Members of the profession in India have petitioned the International Medical Congress (to convene at Rome in April next) for the establishment of a permanent medical journal to be printed in the Latin language for the purpose of publishing abstracts of all important papers, investigations and discoveries throughout the world, thus preserving a condensed, reliable and permanent current history of medical progress in the scientific tongue for reference in all time to come. They propose as a name, The Salernum, to commemorate the fact that the first scientific medical school in Europe was at the town of Salernum, Italy.

THE cost of a medical education, according to *The Hospital*, is in London four hundred to five hundred dollars a year for five years, plus seven hundred to one thousand dollars in fees, making a total of two thousand five hundred to three thousand five hundred dollars. In New York or other large American cities it would be six hundred dollars for three years, and three hundred dollars for fees.

DR. J. SOLIS-COHEN, of Philadelphia, exhibited a patient at a recent meeting of the College of Physicians who speaks without a larynx. As the doctor removed the larynx and the uppermost tracheal ring about eighteen months ago he requested that a committee be appointed to investigate the method by which speech is produced. The most curious thing about this case is that the patient is a male.

THE Superior Court of New York has decided that damages are recoverable for injuries resulting in miscarriage. A woman sustained a blow in the side by a gate which a train guard was closing and a premature labor was the result. Her husband brought suit against the Manhattan Railway Company and the jury assessed damages at two thousand two hundred and fifty dollars, which decree was sustained on appeal.

SIR ANDREW CLARK, president of the Royal College of Physicians of London, is dead. On October 9, while in conversation with a patient, he was suddenly seized with paralysis, and expired on the 6th instant. He was born October 26, 1826, and received the degree of Doctor of Medicine at the University of Aberdeen in 1854. He filled many positions of honor in the profession, notably that of physician to Mr. Gladstone.

MANY secular papers of Kentucky have inaugurated a harangue against the medical practice act recently gone into operation in that state. They brand it as class legislation invoked for the benefit of the medical profession. The law decrees that the quack must go, and as peripatetic advertising is an important factor in the income of these papers, the cause of this ranting is readily traceable to their pecuniary loss. They plead for their pockets—not for the people.

THE late Dr. George Englemann, of Saint Louis, who was botanist as well as physician, received the following well-merited tribute from the pen of Mr. Henry L. Clarke, in the October number of the *Popular Science Monthly*: "To Dr. Englemann belongs the credit of turning the full light of science upon the cacti, the agaves, and the yuccas, and his masterly monographs on those subjects still stand, and will continue to stand, as the backbone of our knowledge of the family of which they treat."

DR ALFRED LUDLOW CARROLL died at his residence in New York City on the 30th ultimo, aged sixty years. He graduated from the medical department of the University of the City of New York in 1855, and practiced in the metropolis until 1871, when he moved to Staten Island. While living there he organized the Staten Island Board of Health and was its first president. Later he was appointed secretary of the New York State Board of Health. He figured as one of the originators of the New Yoak State Medical Association. In 1889 he returned to New York City and resumed practice. He was an indefatigable worker, a graceful writer, and fluent debater.

The professors of the medical department of the University of Georgia have drafted a set of resolutions for presentation to the state legislature, in which they emphatically declare in favor of the reëstablishment of the State Board of Medical Examiners. The preamble asserts that "it is an indisputable fact that since the Board of Medical Examiners of Georgia was abolished by act of the legislature Georgia has been a veritable paradise for quacks who have been driven out of other states."

Dr. Fred R. Seger, a young physician of Adrian, died on the 2nd instant, after a brief illness, of typhoid pneumonia. He had practiced in that city for about ten years and had secured an extensive ride. He was a son of Dr. A. W. Seger and was for several years in partnership with him. He was very popular, intelligent and universally esteemed. A widow and three small children survive him. The doctor was a graduate of the medical department of the University of Michigan, class of 1885.

New Inventions.—A. B. Murray, M. D., Cokedale, Montana: A new intra-uterine irrigator. F. W. King, M. D., New York: Ocular mask. J. H. Claiborne, M. D., New York: Blunt hook and hook-knife for facilitating the operation for secondary cataract. P. J. Gibbons, M. D., Syracuse, New York: An adenotome for the removal of adenoid growths in the vault of the pharynx. James C. Davis, M. D., Rochester, New York: A vaginal speculum for use in irrigating and washing out the uterus and vagina.

The Detroit Fire and Burglar Notification Company, located at 204 Griswold street, is a new concern which bids for public favor. The object of its existence is to notify business men in case of a fire or an accident at their place of business during the night. The owner is notified and a wagon dispatched to his house to bring him down town. The feature in this enterprise of interest to the profession is that which contemplates the notification of physicians in case of sickness, each wagon carrying a messenger to go for a prescription.

A staff officer in the Austro-Hungarian army has invented a water-filter for the use of soldiers. Twelve thousand are now in the service of troops in Galicia. The invention is made in two sizes—one the dimensions of the cavalry water-bucket, the other somewhat smaller. It contains two wire sieves—one resting upon the bottom of the bucket, the other suspended midway between the top and bottom. A little asbestos is placed upon the lower sieve and the bucket placed over a suitable receiving vessel. The pulpy asbestos absorbs the organic matter and a perfectly clear drinking water is obtained.

At the recent meeting of the American Public Health Association, the following resolution was offered, in lieu of a regular report, by Dr. Henry P. Walcott, of Massachusetts, Chairman of the Committee "On National Health Legislation," and was adopted with only two dissenting votes: *Resolved*, That the American Public Health Association again urges upon Congress the necessity of the appointment of some officer with general sanitary authority in connection with the national government. That the functions of such authority are of sufficient importance to demand the exclusive attention of the best instructed sanitarian. That such authority should be enabled from time to time, and under proper regulations, to secure the advice and coöperation of State Boards of Health.

THE meeting of the Southwestern Railway Association held at Saint Louis on the 26th and 27th ultimo, was a pronounced success, about two hundred members being in attendance. The following were elected officers for the ensuing year: President, Dr. Smith, of Tyler, Texas; first vice-president, Dr. Neely, of Memphis, Tennessee; second vice-president, Dr. Jameson, of Palestine, Texas; secretary, Dr. Lightfoot, of Texarkana, Texas; treasurer, Dr. Calloway, of Nevada, Missouri. Waco, Texas, was selected as the place for holding the next meeting.

A SLAUGHTER HOUSE FOR BABIES.—A shocking scandal has been caused in San Francisco by the coroner's investigation of the San Francisco Foundling Asylum, where thirty-three babies died within six weeks. The place has been closed. The coroner ascertained that the thirty-three waifs died of lack of nutrition and maltreatment. The Daughters of the Good Shepherd publicly branded the asylum as a slaughter house for babies. The sanitary conditions of the asylum are very bad. It is charged that the nurses and attendants occupied the sunny rooms upstairs and kept the babies in damp, dark apartments. Before the coroner it was developed that the dead babies had been kept on the premises four days. The official undertaker of the institution testified that when an infant died the attendants put the body in a box under the front doorsteps, and they were kept there like so much garbage until he came to take them away. He had found three bodies cast indiscriminately into the box at one time.

THE Swain and Duffield Memorial Buildings connected with Harper Hospital, of Detroit, were formally opened on the 9th instant. The Swain home is devoted to the nurses of the Farrand training school. Mrs. Eleanor J. Swain, of Detroit, built it at a cost of twenty thousand dollars as a memorial of her late husband, Isaac N. Swain. It is immediately south of Harper Hospital and is connected with the latter institution by a corridor. It is a three-story structure of stone and brick. The interior is finished in oak and Georgia pine. There are quarters for forty nurses, furnished and decorated almost sumptuously. The Duffield cottage is near the home. It is really a double cottage. One-half of it is for nurses who have charge of scarlet fever patients, the other for those who care for diphtheria sufferers. It was erected in memory of the late D. Bethune Duffield by his widow, Dr. George Duffield and Bethune Duffield. It contains everything necessary to make it a comfortable home for the good women who will use it.

A MILK laboratory has been opened in New York City. The purpose of this concern is to dispense milk according to the physician's prescription after the manner that drugs are dispensed by the pharmacist. The enterprise will mark the inception of important changes in the matter of feeding infants and invalids. Milk containing the desired percentage of fat, casein, sugar, and salts can now be prescribed with the knowledge that each constituent is in proportion to the digestive capacity of the patient. The physicians of New York are now in a fair way to attain something like scientific exactness in infant feeding. A laboratory of this kind has been in successful operation in Boston for several years and during the past twelve months over one thousand infants have been fed from it. This innovation will have a tendency to relieve the idiocyncrasic patient of the impression that he cannot partake of milk; and who can divine but that in the evolution of events the much-abused wet nurse may not be relegated to the category of Othello.

THE Amick treatment for consumption is receiving great renown in Minneapolis. A secular publication known and designated as the *Journal* lauds the cure (*sic*) in the following terms: "It is one of the most valuable and wonderful discoveries ever hoped for in medical science, and the formula is not given to every Tom, Dick, and Harry to monkey with, and is preserved from the tampering of fool empiricists." While this cold wave from the northwest is freighted to provoke a shiver, it need not occasion alarm. The temperature of that region compels reporters to freeze to every novel device for padding their blanket sheets.

IN a paper entitled "Some Reasons Why Our Prescriptions Fail," recently contributed to a homeopathic journal, the writer ascribes the inability of homeopaths to effectually combat disease to the following reasons: "(1) Incompetency of the prescriber and the worthlessness of his remedies, and (2) the present incompleteness of our materia medica." Notwithstanding the incompetency of our Hahnemanian friends there is little excuse for not hitting the bull's-eye occasonally with recourse to a boasted armamentarium of eight hundred agents —about double the number we poor unfortunates are obliged to plod along with.

HOG CHOLERA is prevalent in Northern Ohio. A dispatch says that hundreds of swine have fallen victims of the disease, one farmer losing nearly fifty. It will not be necessary to commend this epidemic to governmental investigation. Congress always resolves itself into a helping-hand society for the relief of the lower animals whenever an occasion of this nature presents, besides annually expending about seven hundred thousand dollars in ferreting out the causation of disease in the animal kingdom, and it is to be presumed that this outbreak of hog cholera will receive prompt attention at their hands. In view of the great magnanimity of this august body in the direction mentioned it would seem that any measure contemplating the health of human beings ought to receive legislative consideration commensurate with the value of the lives of sixty millions of people. It would require only about thirty thousand dollars a year to maintain a department of public health at Washington, and the refusal of Congress to make the appropriation is simply an indication of the consummate pigheadedness displayed by this body when dealing with sanitary measures.

PRIZE ESSAYS ON THE ACTION OF ALCOHOL AND ITS VALUE IN DISEASE.—The American Medical Temperance Association, through the kindness of J. H. Kellogg, M. D., of Battle Creek, Michigan, has decided to extend the offer of the following prizes for the year 1894: (1) One hundred dollars for the best essay "On the Physiological Action of Alcohol, based on Original Research and Experiment." (2) One hundred dollars for the best essay "On the Non-Alcoholic Treatment of Disease." These essays must be sent to the secretary of the committee, Dr. Crothers, Hartford, Connecticut, on or before April 1, 1894. They should be in type-writing, with the author's name in a sealed envelope, with motto to distinguish it. The report of the committee will be announced at the annual meeting at San Francisco, California, in June, 1894, and the successful essays read. These essays will be the property of the Association and will be published at the discretion of the committee. All essays are to be purely scientific, and without restrictions as to length, and not limited to physicians of this country. Address all inquiries to T. D. Crothers, M. D., secretary of committee, Hartford, Connecticut.

The International Congress of Public Health recently in session at Chicago under the auspices of the American Public Health Association, adopted the following resolutions: Offered by Dr. J. E. Monjarás, of Mexico:—*Resolved*, (1) That the educational authorities of the various nations represented here be requested to devote a longer time than they now do, in their curriculum, to the teaching of hygiene. (2) That the governments of the countries represented at this Congress be urged to appoint to sanitary positions and commissions only such persons as may have acquired a special education in sanitary studies. Offered by Dr. Benjamin Lee, of Pennsylvania:—*Resolved*, That the International Congress of Public Health affirms in the strongest possible manner its confidence in the value of vaccination as a preventive of small-pox. Offered by Mr. Henry Lomb, of Rochester, New York:—*Resolved*, (1) That this Congress urge upon the people of the countries here represented the importance of completing our sanitary organization by forming voluntary public health associations, to study for themselves the conditions of healthy living in the home and the community, and to afford efficient and persistent support to the work of public health officials. (2) That this Congress respectfully ask state and local boards of health to assist in all proper ways the formation of such organizations.

THE NEW UPPER PENINSULA INSANE ASYLUM—The new insane asylnm, for the construction of which an appropriation of seventy-five thousand dollars was made by the last legislature, will be located at Newberry, the county seat of Luce county, in the Upper Peninsula. The State Board of Corrections and Charities, at a meeting held at Lansing on the 2d instant, canvassed propositions from Menominee, Sault Sainte Marie, Marquette, Saint Ignace, L'Anse, Ontonagon and Newberry. The offer made by the latter town was selected by a practically unanimous vote. The village of Newberry contains about three thousand inhabitants, located about midway between Lake Superior and Lake Michigan. The site selected for the asylum is a slight elevation on the south side of the incorporation, and comprises five hundred and sixty acres, four hundred of which is under improvement, and the remainder valuable woodland. A spring lake containing about twenty acres and about fifteen feet in depth is located on the ground. The hygienic condition of Newberry seems to be excellent, the death-rate for the past five years in Luce county being but five in one thousand, which is only one-quarter the annual death-rate of the most healthful cities in the United States. Governor Rich will now appoint a commission to adopt plans and specifications for the building and proceed with the work of erection.

RECENT PUBLICATIONS.

REVIEWS.

A TREATISE ON OPHTHALMOLOGY.*

THIS manual of ophthalmology Dr. Alt has written mainly for the benefit of the general practitioner. The success of the first edition has warranted the issue of a second. This is enlarged and newly illustrated. Details of interest only to the specialist are omitted, as are illustrations of optical instruments.

The general principles of ophthalmology are carefully outlined. The chapters on the diagnostic value of eye diseases in intracranial affections and on those eye affections caused by disease of distant organs, will be found specially useful. The publisher's part of the work has been carefully performed and the volume will be a useful addition to the library of every general practitioner.

* By Adolph Alt, M. D. Three hundred and forty pages. Cloth. Price, $3.50. J. H. Chambers & Company, 904 Locust street, Saint Louis, Missouri.

A TEXT-BOOK OF OPHTHALMOLOGY.*

A FULL and comprehensive manual of ophthalmology has been prepared by Drs. Norris and Oliver for the use of students and practitioners, which is destined from its obvious merits to obtain a foremost place in the literature of the subject to which it pertains. The work is in many respects a model of what such books should be. Tersely written, amply illustrated, and splendidly printed, it deserves the commendation of all lovers of good work. Students who may at this time of the year be selecting their text-books, should not fail to inspect this work.

* By William F. Norris, M. D., Professor of Ophthalmology in the University of Pennsylvania, and Charles A. Oliver, M. D., Surgeon to Willis Eye Hospital, Philadelphia. In one very handsome octavo volume of six hundred and forty-one pages, with three hundred and fifty-seven engravings and five colored plates. Cloth, $5.00; leather, $6.00. Philadelphia: Lea Brothers & Company, 1893.

ANATOMY, DESCRIPTIVE AND SURGICAL.*

A BOOK which has maintained its supremacy for thirty years, without fundamental modification of its subject-matter, must have merits of a lasting and far-reaching kind. "Gray's Anatomy" has been a luminary of science, shining with the constancy of a fixed star, not with the impermanent splendor of the comet. Conning the familiar pages of this manual, the reader will find many of the illustrations upon which he pondered in his college days unchanged. A comparison, however, with older additions shows how marked has been the advance in some regions of anatomy. The nervous system is entirely different, and even between the thirteenth edition and its immediate predecessor many changes will be noticed. A new feature in the present edition is the embellishment afforded to the illustrative portion of the work by the use of colors. The vascular arrangements and relations are admirably exemplified by this device.

"Gray's Anatomy" is not now without competitors for the favor and patronage of the medical student, but as a text-book it is unrivaled in so many departments that nothing is needed to commend it to the consideration of its friends.

* By Henry Gray, F. R. S., Lecturer on Anatomy at Saint George's Hospital, London. New American from the thirteenth enlarged and improved English edition. Edited by T. Pickering Pick, F. R. C. S., Examiner in Anatomy, Royal College of Surgeons of England. In one imperial octavo volume of one thousand one hundred pages, with six hundred and thirty-five large engravings. Price with illustrations in colors: Cloth, $7.00; leather, $8.00. Price with illustrations in black: Cloth, $6.00; leather, $7.00. Philadelphia: Lea Brothers & Company, 1893.

REFERENCES.

LITERARY MENTION.

"American Text-Book of Gynecology."—Mr. W. B. Saunders, of Philadelphia, announces this work as ready for early issue. It is the joint work of Drs. Howard Kelley, Pryor, Byford, Baldy, Tuttle, and others, who stand before the profession for all that is progressive in gynecology. The work will contain operations not before described in any other book, notably ablation of fibroid uterus. It is designed as a profusely illustrated reference book for the practitioner, and every practical detail of treatment is precisely stated. This publisher also announces the early appearance of the second volume of "Pepper's Theory aud Practice of Medicine." The manuscript is now in the hands of the printer and the profession may look for the work a month hence. In the first volume nearly two hundred pages are from the pen of Dr. William Pepper, and in the second volume he writes more than three hundred pages, thus making over one-fourth of the entire work from the editor. Within the next two months "American Text-Book of Diseases of Children," edited by Dr. Louis Starr, will be issued from this publishing house. This work, as well as the "Gynecology," will contain a large number of beautiful illustrations, a great number of which are originals. In point of perfection it will be far in advance of any single volume work on "Children" yet issued, and will contain as many colored and full page illustrations as is usually put in works of four and five volumes.

"A New Illustrated Dictionary of Medicine, Biology, and Collateral Sciences."—Dr. George M. Gould, already well-known as the editor of two small medical dictionaries, has now about ready an unabridged, exhaustive work of the same class, upon which he and a corps of able assistants have been uninterruptedly engaged for several years. The feature that will attract immediate attention is the large number of illustrations that have been included, many of which—as, for instance, the series of over fifty of the bacteria—have been drawn and engraved especially for the work. Every scientific-minded physician will also be glad to have defined several thousand commonly used terms in biology, chemistry, et cetera. The chief point, however, upon which the editor relies for the success of his book is the unique epitomization of old and new knowledge. It contains a far larger number of words than any other one-volume medical lexicon. It is a new book, not a revision of the older volume. The pronunciation, etymology, definition, illustration, and logical groupings of each word are given. There has never been such a gathering of new words from the living literature of the day. It is especially rich in tabular matter, a method of presentation that focuses, as it were, a whole subject so as to be understood at a glance. The latest method of spelling certain terms, as adopted by various scientific bodies and authorities, have all been included, as well as those words classed as obsolete by some editors, but still used largely in the literature of today, and the omission of which in any work aiming to be complete would make it unreliable as an exhaustive work of reference. The publishers announce that, notwithstanding the large outlay necessary to its production on such an elaborate plan, the price will be no higher than that of the usual medical text-book.

MEDICAL PROGRESS.

MEDICINE.

RATIONAL QUARANTINE.

It is becoming more and more evident that the protection of a country against the inroads of an epidemic does not so much depend upon a quarantine which keeps out all passengers of an infected vessel for a certain period of time, whether they are healthy or not, as upon local sanitation based upon the proper understanding of the etiology of disease. The apparently insufficient quarantine laws of Great Britain have by some been attributed to a concession made to its commercial interests, but in the present light of scientific facts it appears, in the case of cholera at least, that the placing in quarantine of healthy persons coming from an infected part, or that are passengers of a vessel upon which cholera has broken out, is a measure which, if carried out strictly in harmony with scientific facts, does not seem justified, when its advantages and disadvantages are balanced. Cholera germs have been observed to live in the bowel of man for eighteen days, they have also been found by Koch in the dejecta of apparently healthy individuals who had exposed themselves to the same influences as the cholera patients or had come in contact with the latter. In these examinations it was found that among a number of persons that had all been exposed to the same influences cholera attacks from the lightest to the severest form occurred, and in some the symptoms were so slight that only a bacteriological examination revealed the fact that a cholera infection had taken place. These researches explain the negative results obtained by swallowing cultures of cholera germs as well as by other silly attempts at infection. If it is possible then that cholera germs may remain in the bowel for eighteen days or possibly longer, a shorter period of quarantine seems illogical, and knowing, aside from this fact, that cholera cannot be kept out of a country with certainty by quarantine the very pertinent question arises whether quarantine of healthy persons is really necessary and whether communities depending too much upon quarantine would not be apt, in consequence of a feeling of safety, to neglect other sanitary measures that are of greater importance. The government should look to the appointment of competent sanitary officers, and take care that above all, the water supply is unobjectionable.

A memorandum of great interest defining the attitude of Great Britain toward quarantine has lately been prepared by Dr. Thorne, medical officer to the local government board, in answer to a request of the foreign office to be supplied with a statement, "setting forth the general measure of the standing precautionary measures adopted in the United Kingdom to prevent the introduction of contagious or infectious diseases." In reply Dr. Thorne (*Lancet,* July 1 and 22) states:

"For nearly fifty years past it has been held that reliance on a quarantine system would be, to a large extent, impracticable, and that any attempt to carry it out would be injurious, both by reason of engendering a false sense of security and by affording a pretext to sanitary authorities for avoiding expenditure of those local funds on which, in this country, we depend alike for effecting large schemes of sanitary improvement and for carrying out our current sanitary administration. Hence, our principal trust has been in securing amendment in every way in the sanitary circumstances under which the population are living; and defense against cholera in this sense has been supplemented by the adoption of a series of cholera regulations which apply to our ports and coast line and which are aimed at preventing the introduction of cholera by means of shiping. * * *

If, as the result of examination, the medical officer of health certifies a ship to be infected with cholera, the ship must be moored at a specified place, and every person on board is required to submit to examination. Every person who, as a result of that examination, is not certified to be suffering either from cholera or from any illness which the medical officer of health suspects may prove to be cholera, is permitted to land immediately on satisfying the medical officer of health as to its name, place of destination, and address at such place. This information is communicated to the sanitary authority at the place of each such persons intended arrival, and it is for that other authority to take measures (which commonly include a visit for some five consecutive days, on the newly arrived person) such as may be expected to prevent extension of cholera, should that disease appear in anyone after arrival in their district. Any person on the ship who is certified to be infected with cholera is required to be removed to a hospital provided by the sanitary authority. Should the condition of the patient not permit of this, the ship is detained under the control of the medical officer of health. And any other person certified to be suffering from an illness which it is suspected may prove to be cholera, can similarly be detained for the purposes of diagnosis for a period not exceeding two days. The ship is required to be disinfected and other precautionary measures have to be adopted as regards drinking-water, bilge-water, infected articles, dead bodies, et cetera, after which she is at once released.

The only instance in which any further measure of restriction can be applied is as to persons on board a ship, which though not infected with cholera, either carries passengers who are in a filthy or otherwise unwholesome condition or has come from a place infected with cholera. If, in any such case, the medical officer of health deems it necessary to intervene, with a view to checking the introduction or spread of cholera, he is required to give a certificate to that effect. When such certificate has been given no person is allowed to leave the ship unless he satisfy the medical officer of health as to his name, place of destination and address at such place, such information to be utilized in the same way as in the case of a ship certified to be infected with cholera. But beyond this step there is no right of interference either with the vessel or with those on board.

The English cholera regulations do not profess to be so framed as to prevent all chance of the importance of cholera into the country. They aim at detection and arrest of all actual or suspected cholera at our ports and at giving the earliest possible warning to inland authorities as regards particular persons about to arrive in their respective districts. If, in spite of these measures, the disease should be imported, every sanitary authority for the maintenance of conditions which should enable them to deal with imported cholera in such a way as to prevent its extension."

In a lecture delivered at Saint Bartholomew's hospital, Dr. Thorne says:

"Up to a recent date the continental powers had relied essentially upon a rigid quarantine system. Quarantine, as applied to the Thames, for example, would mean the detention of all vessels coming from infected ports for a period varying from ten to five days, according to the conclusions of the Constantinople conference or of the Rome conference were accepted. During that period healthy or sick alike would be prohibited from having any communication with the shore. If, during the quarantine detention a case of cholera occurred on board, the whole of the crew and passengers together with the ship, would have to go through a second period of detention and so long as any fresh attack occurred. In the meantime shipping would be accumulating and the result for us would become a mere absurdity. And not only so, but half-a-crown would at night secure a boatman's service for landing on the river banks. In short, the system would only have to be applied to insure its immediate breakdown.

England decided against quarantine for another reason. If the people in this country were told that a line had been drawn round England to keep out cholera, a death-blow to our sanitary administration would at once be dealt. Since they have been told that cholera cannot, with certainty, be kept out of the country, and that they themselves must be prepared to deal with it if it is imported by maintaining their district in such a sanitary condition that the disease shall not spread if it should make its way into them, eight millions sterling have been spent in sanitary works every year and hundreds of thousands of lives have been saved from typhoid fever and other epidemic diseases. The general mortality has largely decreased and a Frenchman—an old fellow-student of his—who is now at the head of the public health service in France, has calculated that, according to the estimate of human life by Dr. Farr, and other English authorities, taking all the millions we have spent and all the lives that have been saved (I forget the exact sum), we have just got our money back. It might almost seem as if we had done it on purpose. No greater calamity could happen to this country than to apply the system of quarantine. At Dover alone in one week in August, five thousand eight hundred people arrived at the port. What would Dover have done had she been obliged to quarantine them? They could not have them in the harbor at night, for they could easily have escaped; they could not have them on land for a similar reason. If they had put them to sea they would probably have been sunk by the first tempestuous wind. The attempt would be perfectly ridiculous and could be attended by nothing but disaster.

Quarantine was also a cruel process. That was best exemplified by reference to land quarantine, as, for example, during the Egyptian outbreak of 1883, when villages and communities were surrounded by troops with loaded rifles and bayonets. Any person taking food within the prohibited line would be subject to the same quarantine as the villagers, and it is believed that land quarantine has often destroyed more lives by starvation and misery than would have been sacrificed by cholera. But land quarantine, too, is essentially inefficacious, the line being broken without diffculty, whether in Egypt or elsewhere, by all who can afford to pay their tribute of backsheesh.

For England the abandonment of quarantine has been an almost unmixed good. The knowledge that no pretense would be made to keep out all chance of cholera in this country has done more perhaps than anything else to induce our sanitary authorities to spend their money on great works of sanitation and on such improved sanitary administration as is likely to prevent the spread of any imported disease of the type of cholera. Millions have been spent to this end; but on the other hand hundreds of thousands of lives have been saved. Even if cholera should once more succeed in passing the barrier of our ports and diffusing itself inland and cause a heavy mortality, we should still be enormously the gainers in point of human life by the system which we have so deliberately adopted; but there is no doubt that our system is rather calculated to prevent than to lead to such a contingency."

The English method of dealing with epidemics appears to be an eminently practical one and in harmony with scientific facts, and it is to be hoped that in the future, at least in the case of cholera, the United States government will not lay so much stress upon quarantine of the masses as upon isolation of individuals and the carrying out of such sanitary measures as will remove the fuel for the spreading of an epidemic.—*Medical Review.*

THE ETIOLOGY OF CHRONIC ARTICULAR RHEUMATISM.

It has long been a matter of doubt as to whether or not any etiologic relation exists between the three groups of affections that are ordinarily designated acute, subacute, and chronic rheumatism, with a disposition to decide the question in the negative. Of the three, acute rheumatism is the only one at all well defined, from the stand-points of symptomatology, morbid anatomy, and therapeutics. Into the other two groups are usually cast all of the vague and uncertain painful conditions affecting musculo-fibrous and fibro-articular structures. The confusion attending the classification of these is eloquently indicated by the absence of a distinctive semeiology, by the want of a definite pathology, and by the lack of a distinctive therapy. There have even not been wanting observers that were willing to include some of the cases of chronic articular rheumatism among the tropho-neuroses, dependent upon changes in the spinal cord.

Little light has been thrown upon this obscure subject, but a recent communication by Schüller (*Medical Record*, 1893, Volume XLIV, Number XIII, page 389) would seem to point the way for further investigation in at least one direction. This observer has made a clinical, anatomic, and bacteriologic study, embracing one hundred and sixteen cases of so-called rheumatic articular inflammations. In these he found hyperplastic inflammatory changes in the synovial membranes of the affected joints, and from the tissues and fluids of which he was able to isolate a peculiar bacillus, to which he ascribes etiologic influence. He was further able to transmit this organism to lower animals, inducing lesions in these comparable to those observed in man, and again to obtain from the lesions the specific bacilli. The organisms are described as being from 2.24 to 2.76μ long, and from 0.75 to 0.95μ wide; usually straight, though sometimes slightly curved or angular; presenting bright granules at either pole; staining readily with carbol-fuchsin; and decolorizing with acids, et cetera. In culture they grow best in the dark, at a little above ordinary temperature, forming opaque-white colonies that slowly liquefy gelatin.

These observations are not to be accepted as final, as the investigation has not been entirely completed. There is, however, no *a priori* ground on which to reject the conclusion to which they lead. On the contrary, there is growing evidence that acute rheumatism is of microbic origin (see *Medical News*, August 26, 1893, page 247), and it is not too much to hope that before long we shall know more than we do concerning so-called subacute and chronic rheumatism, which, as has long been believed, are not at all rheumatic in nature.

Bacteriologic science has met with inevitable, and not unhealthy, antagonism, with the result of stimulating better work, with more reliable and more permanent results. As a consequence, it is likely that fewer mistakes will be made, and less hasty conclusions reached, than has been the case in the past, and we can look forward to the future of bacteriology with growing hope and confidence. —*Medical News.*

THE TREATMENT OF SENSITIVE SPINES.

Lovett (*Boston Medical and Surgical Journal*, Volume CXXIX, Number II) does not give a better name for the disease the treatment of which he describes than that given in the title of the abstract. He states that it appears as a sensitive and painful condition of the spine, manifested by sensitiveness most often over the spinous processes of the vertebræ, pain on motion and manipulation, and by the general symptoms of neurasthenia. Although the condition is evidently not due to organic change, it persists for years, varying but little, and leading generally to a bedridden and helpless condition in the severer cases. Usually it is possible to trace the beginning of the cases to some injury; in other cases there seems to be no traumatic origin, yet the same symptoms. The injury is usually a fall, or more or less severe jarring of the spinal column. In some cases it begins slowly, perhaps after some exhausting disease. At times this pain and sensitiveness spread over the whole back, but mostly it is limited to a certain area over the vertebral column. It may be cervical, or it may be confined to the sacrum and coccyx; and a fairly common situation is over the sacro-iliac joints, but the most common appears to be in the dorsal or lumbar region. The sensitiveness is apparent to both deep and superficial pressure. It is often sharply localized, and the pain is generally limited also to the area affected. Standing aggravates the pain, as do also riding in a carriage or car, and sitting in an uncomfortable chair, so that relief is sought by recumbency. At times the pain persists during recumbency, but even in these cases it is made worse by sitting, standing, or walking. The spine is perfectly flexible, but motion may be voluntarily restricted in certain directions on account of the pain caused. In the severer cases the spine may be, and generally is, held quite rigid over the affected area, either by voluntary or involuntary muscular effort. There is no angular deformity, such as one finds in Pott's disease, although unnatural attitudes may be assumed on account of the sensitiveness, such as a rounding out of the whole back in the dorsal region or a slight lateral deviation. The most important local condition is that of muscular weakness, both general and of the spinal muscles. It is to be noted on inspection and by measuring the strength of the muscles of the back by manipulation. This theory of muscular weakness explains the pain, on the supposition that, in the absence of proper muscular support, the body-weight comes more upon the posterior spinal ligaments, and the fascia and aponeuroses of the back, than it should, and that this is the immediate and primary cause of the pain. Just as in flat-foot, when first the muscular support gives place to ligamentous support, intolerable pain is to be felt in the ligaments. This does not and cannot be assumed as the cause of every case of spinal sensitiveness, for it occurs at times in patients with muscles of normal strength, as measured by an apparatus for testing the back muscles.

The general condition of these patients is of the utmost importance and significance. In most cases they show marked neurasthenia. They are, for the most part, young and middle-aged women of nervous temperament and poor development. As a general rule, they are badly nourished. They walk feebly and stiffly, and often they are entirely bedridden.

As to treatment, the severer cases and those in which the general condition is markedly poor should be put to bed for some time, and treated by the Weir Mitchell plan of rest and feeding. This is indicated both as a means of improving the general condition and also to quiet and rest the irritated spinal ligaments by removing the strain from them. The patients are kept entirely recumbent, and made to use the bed-pan in the more severe cases. They are fed every hour or every two hours, taking in the twenty-four hours eight to fourteen eggs, besides milk, beef-tea, and meat. They are massaged gently every second day; and after a few days of this treatment, the use of faradic electricity is gradually begun on the day when massage is not given. The back is excessively sensitive, and the current is mildly applied, avoiding at first the sensitive spots. Massage and electricity rapidly diminish the sensitiveness of the spine.

After a continuance of this treatment for days or weeks, according to the general condition of the patient, she is allowed to sit up in an easy chair for five minutes, with the back supported; and then the time is rapidly increased.

At this time it is common to begin with exercises calculated to develop the erector spinæ muscles. These exercises have invariably in Lovett's hands aggravated the pain, which is generally much diminished by the recumbency. The exercises prescribed are arch flexions of the spine when sitting; then resistance is offered to backward flexion of the trunk, with the arms behind the head; and, finally, when the patient is much stronger, she lies on the face, and the feet are held while, with the arms on the hips, she flexes the trunk. It is merely a question of prescribing easy motions which cultivate the erector spinæ muscles, then addressing motions particularly to the region most affected, whether cervical, dorsal, or lumbar. One of the most successful cases that the author has treated in this way was a young woman, in whom the pain and sensitiveness were limited to the sacrum and coccyx; and it required the most intimate knowledge of the Swedish movements on the part of the masseuse to apply them so as to reach the proper muscles.

As the exercises are prescribed the patient is encouraged to walk a little; and if spinal motion is very painful, a supporting-brace is allowed, which consists of a steel waist-band and two tempered steel uprights fastened to shoulder-straps. This is used merely to support the spine until the muscles are able to do so, and is to be regarded as a temporary measure, to be abandoned at the earliest possible moment. The patient is gradually encouraged to do more each day, without regard to her sensations, except during menstruation, when she is kept in bed.

Personally, the writer, in cases where there is any question of uterine trouble, always has an examination made by a gynecologist, to be sure that no uterine displacement exists which might cause the backache. The patient is encouraged to progress as fast as may be, and to leave invalid ways behind her. The treatment is, in a word, first, rest, and then musular development, in connection with the most effective measures addressed to the general condition.

But a great many patients do not need such stringent measures as these, nor, on the other hand, can every one give up entirely for weeks or months; a treatment which can be pursued at home, and which is perfectly suitable for lighter cases, must be found. These patients should be encouraged to lie down, at least part of the day; even working-people can save two or three hours by going to bed early. If possible, they should lie down both morning and afternoon, and should get up late. In short, the same aim of resting the back should be kept in mind as in the severer cases, and this should be accomplished in every way.

In such cases the elastic brace should be applied almost as a routine treatment; and in severer cases a rigid steel back-brace to prevent spinal motion when the sensitiveness is severe, taken off only for exercise.

The general condition is most carefully looked after, the bowels are regulated, the appetite is stimulated, and eggs (from six to ten daily) are prescribed, often with a little alcohol. Walking and riding are almost invariably painful, and it is always a question how much of these exercises should be done. It seems best at first, during the period of rest, to limit them as much as possible, and to increase them very gradually, laying the chief stress upon exercise devoted to the muscles affected.

Many patients cannot afford, or for some reason cannot have, massage and electricity, and yet they do well, only they progress more slowly. If attainable, these means of treatment are of the utmost importance. Hot douches to the spine have often been of use in such cases. The exercises are the same as those used in the severer cases, and for the best results the cases should be in the hands of some person skilled in massage and Swedish gymnastics. The tendency is certainly to err on the side of encouraging these patients to do too much, to walk too far and to over-exercise, and one has to remember continually how great is their disability and how carefully they must be handled.

The brace is gradually discontinued, the amount of exercise increased, and the period of recumbency diminished. It is the same plan of treatment as before,—first, rest, and then graduated and progressive exercise,—and these are no more important than is the general routine of treatment addressed to the general neurasthenia; either alone accomplishes little.—*Therapeutic Gazette.*

SOME PRACTICAL POST-MORTEM POINTS.

(1) Get all the anatomical knowledge you can out of every autopsy you make. It is therefore usually advisable, especially in the case of females, to perform a preliminary laparotomy. Many surgical operations can be practiced upon the body without disfigurement—such as Alexander's operation, oöphorectomy, removal of the ear ossicles and vermiform appendix, stretching of the sciatic nerve, symphyseotomy, et cetera.

(2) Do not forget to dictate the post-mortem notes while the autopsy is in progress.

(3) Respect the feelings of the friends in every possible manner, and always return everything in a private house to its proper place. Be sure to leave no blood marks behind.

(4) Be sure you have a legal right to make the post-mortem before you begin. The nearest relative, or the one who is going to pay the expenses of the funeral, should give the consent in writing.

(5) Do not take away more tissue from a post-mortem than you are able to thoroughly work up.

(6) Try to encourage a demand among the laity for the performance of autopsies.

(7) In making an autopsy have a regular method for its performance, which is only to be modified by exceptional circumstances. Finish the examination of each organ in as thorough a manner as possible before the examination of another organ is commenced.

(8) Label all your specimens at once with name of person from whom the specimen is removed, character of the specimen and relations in the body, date, and preservative fluid employed.

(9) If you are so unfortunate as to cut yourself, wash the wound with running water for four or five minutes, and then dress antiseptically. Do not, out of bravado, go on with the post-mortem if there is any one else present who can complete it.

(10) If you are not making the autopsy yourself, do not be too forward in making suggestions to the one who is making it but always be ready to do anything that you are asked to do in connection with the autopsy.

(11) Let your medical friends enjoy the autopsy and specimens with you.

(11) Get all the post-mortems you can; never refuse to make an autopsy for another, when you possibly can.

(13) Tact will get you many autopsies; curiosity of relatives and friends can often be worked upon to get permission for an autopsy.

(14) As the object of the autopsy is usually to find out the cause of death, either for legal or scientific purposes, the post-mortem should, therefore, be conducted in as thorough and accurate a manner as possible.

(15) In legal cases be sure to protect yourself in every possible way. The jars (which should never have been used) containing the specimens should be sealed in the presence of a witness. In important cases here in Philadelphia the coroner has both of his physicians present at the autopsy, so that the testimony is stronger; and in case of absence of one of the physicians the other can go on the witness stand and the case not be postponed.

(16) If you value your peace of mind do not put yourself forward as an expert witness in medico-legal matters. Knowledge which you already have should be freely given to the court in criminal cases, but the court cannot compel you to obtain expert knowledge without your consent.

(17) In Germany the legal evidence of a post-mortem held by gaslight has been judged by the court, except under certain peculiar circumstances, to be void.

(18) If two persons are lifting the body the lightest weight is at the feet.

(19) Chloroform, when placed on a towel and the head enveloped in the towel, will quickly dispose of pediculi capitis.

(20) Many signs of inflammation, especially of the mucous membrane, disappear after death. Remember that red flannel often colors the skin red.

(21) Make the undertaker your friend. Do not recommend an undertaker who disapproves of post-mortems.

(22) It is a good knife that will keep its edge in more than one post-mortem.

(23) Do not jump at conclusions too quickly. Tentative diagnoses alone should be made until the post-mortem is complete.

(24) Always weigh the important organs, and have some method by which you can tell the right from the left organ in case of the double ones. One nick in the left-sided organs and two in the right will readily distinguish them.

(25) Wash your hands frequently during the performance of an autopsy, so as not to allow the blood to dry on the skin.

(26) In opening a cystic kidney be careful that the liquid does not injure the eyes or soil the linen, as when the kidney is opened the liquid in the cyst is under pressure and may squirt several feet.

(27) A duct can often be easily followed by making a nick in it, and then introducing a piece of broomstick or a groove director in the direction you desire to dissect. This is especially useful in the ureters and the ductus choledochus communis.

(28) In writing the account of an autopsy describe what you see; do not use names of diseased conditions. These should be put in under the head of pathological diagnoses.

(29) Urine or aromatic spirits of ammonia will best take off the odor from your hands. This odor is usually got from opening the intestines.

(30) Ammonia (also the aromatic spirits) will remove iodine stains; a weak solution of the hypobromite solution will remove carbo-fuchsine and other aniline stains from the hands.

(31) Any organ which you desire to save should be placed in a safe place so that it will not be returned to the body and sewed up.

(32) The dissecting-room is a poor place to study pathology, on account of the chloride of zinc forming with albumin an insoluble albuminate of zinc.

(33) Nervous tissue for microscopic study should not be placed in zinc chloride or in alcohol.

(34) Remember that a post-mortem, with the exception of the brain and cord, can be made with a penknife.

(35) Remember that the thoracic and abdominal organs can be removed by the rectum or the vagina.

(36) Before removing the calvaria have a basin so placed that it will receive the blood and cerebro-spinal fluid.

(37) Drawings, photographs, casts, cultures of microörganisms, and microscopic slides are valuable additions to a well-written account of an autopsy.

(38) A lesion in one part of the body will often suggest a careful search for a lesion in another part of the body.

(39) Do not mistake the normal for the abnormal.

(40) Squeezing the gall-bladder after the duodenum has been laid open will often cause bile to pass out, and the papilla, the ending of the common bile duct, can thus be demonstrated.

(41) Remember that frozen sections of fresh tissue can be cut and mounted in a half hour to an hour.

(42) Three hours is none too long in which to make a complete autopsy.

(43) Be careful that the first rib does not scratch your hands when removing the tissues in that region. Therefore cover over the cut ends of the clavicle and ribs with the skin flaps.

(44) Blood makes a good glue for affixing labels, and the blood of a person who has died from hydrocyanic poisoning makes a most excellent red ink which will keep for years without the addition of any preservative fluid.

(45) Remember that after the brain has been removed the fundus of the eyes can be removed by a circular incision posteriorly, without disfigurement. The inside should then be stuffed with dark-colored wool or cloth.

(46) In private cases you will be frequently judged of as to your skill as a pathologist by the neatness with which you sew up the body.

(47) If you discover suspicious lesions, always stop the post-mortem and report the case at once to the coroner.

(48) Remember in warm weather that the intestines are especially liable to undergo rapid decomposition when exposed to the air.

(49) Remember that a railway train or cart may pass over the body and there be no abrasion in the skin more than a brush burn.

(50) Remember that the color of organs is frequently changed when exposed to the air by the oxidation of the hemoglobin. Also that the sulphide of iron frequently discolors organs after death, due to the sulphureted hydrogen during decomposition precipitating the Fe of the hemoglobin.

(51) The clavicle can be grasped and moved and the claviculo-sternal articulation thus readily discovered.

(52) In removing the cord the following method may be used without disfigurement to the skin of the back part of the neck: Make a circular incision from the middle of the trapezius muscle of the one side to the middle of the same muscle of the other side, using as the center of the circle the external occipital protuberance. This will take you in the median line to about the second dorsal vertebra; then dissect away the skin with the muscles attached, and elevate this flap with a tenaculum and draw the shoulders backward. A sufficient amount of space will be given to then remove the cord in the usual manner.

(53) If the rectus muscle on each side is cut near its origin, in the direction of Poupart's ligament, the abdominal cavity will be much more thoroughly exposed to view than in the ordinary manner. First, however, examine with the finger for hernia.

(54) And lastly be honest. Every one diagnosticates lesions during life which are not found at the post-mortem. Even after a most careful post-mortem it is often impossible to tell from what the patient died.—Dr. H. W. Cathell, before the Philadelphia Medical Society.

SURGERY.

THE TREATMENT OF POSTERIOR URETHRITIS BY IRRIGATION, WITHOUT THE USE OF TUBE OR CATHETER.

In view of the fact that deep urethral injections by the Ultzmann syringe constitute the most generally accepted method of treatment of posterior urethritis, a few brief notes upon a method of treatment which I have frequently found to be of great service may not be out of place.

Right here let me call attention to what seems to me to be a quite prevalent error regarding the diagnosis of posterior urethritis,—namely, it is often supposed that a persistent discharge from the meatus is indicative of posterior urethritis. I desire to assert my belief that posterior urethritis *per se* never gives rise to a visible discharge. It may do so by infecting the anterior urethra, but in no other way. The reason for this is obvious,—pus in the prostatic urethra passes in the direction of the least resistance. This is always toward the bladder. The true spincter—always on guard—allows no fluid to escape forward in the intervals of urination. Fill the prostatic urethra with nitrate of silver solution, and unless vesical spasms and strangury occur not one drop will escape into the anterior urethra; it will, however, escape into the bladder if quite a quantity enters the prostatic urethra. Whenever, then, posterior urethritis is accompanied by urethral discharge, there is disease in the anterior urethra. No treatment is apt to be successful, therefore, which does not comprehend the restoration of the anterior urethra to its normal condition. Many a so-called posterior urethritis gets well so soon as large-calibred penile strictures have been cut.

Another point: In almost all cases of posterior urethritis the patient gives a history of so-called "prostatitis," "neuralgia of the vesical neck," "cystitis," "irritable bladder," et cetera.

Irrigation of the deep urethra by catheter or tube is a rank failure, and generally does more harm than good. In the anterior urethra it is a failure because the folds of the mucous membrance are not smoothed out and thoroughly disinfected. Any system of treatment that does not reach every portion of the infected area is energy misapplied; furthermore, the resulting traumatic irritation favors reinfection. The bladder itself usually requires attention in posterior urethritis.

And now for a plan which will carry our antiseptic and microbicidal medicaments to every nook and cranny of the infected area. This desideratum is favored by irrigation of the urethra through a short nozzle, the meatus being compressed about the nozzle so that the fluid may balloon the urethra thoroughly. The degree of pressure is readily adjusted by raising or lowering the irrigator. As a rule it should be at about the level of the patient's head, he being in the standing posture. It can be further regulated by the degree of compression exerted by the thumb and finger about the nozzle: the more fluid that is allowed to escape, the less the pressure within the urethra. After the anterior urethra has been thoroughly washed the patient should try to urinate while a full stream of antiseptic fluid is ballooning the urethra. Relaxation of the spincter results, and the fluid enters the deep urethra and bladder. As soon as the bladder is filled—which the patient readily appreciates—the fluid should be allowed to escape. The process is repeated until several quarts of fluid have been injected and ejected. I first use a moderately warm solution containing as much boracic acid as will dissolve, with ten grains of salicylic acid and an ounce of glycerin to the quart. This irrigation removes all shreds of muco-pus and effete epithelium. I then use about a pint of warm solution of nitrate of silver, in a strength of from one-fourth to one grain to the ounce. This attacks the abraided and congested points quite as vigorously as will five or ten-grain solutions given in the ordinary manner. Other astringents and antiseptics may be used, but the silver solution is the best on the average. Should pain and strangury be severe, it may be allayed by an injection of a few drops of four-per-cent. solution of cocain, or by an eighth of a grain of morphia per orem. The morphia may be given a short time before the treatment or immediately after it. I wish it understood that I advocate this treatment only in chronic cases.—Dr. G. F. Lydston in *Internatinal Medical Magazine.*

GYNECOLOGY.

FOUR WOMEN WHO REFUSED OÖPHORECTOMY AND THEIR SUBSEQUENT HISTORIES.

Case I.—Widow, thirty-five years of age, mother of three children, has been under my care for the past seven years. Has an anteversion and painful menstruation; uterine condition normal in other respects; during my time of attention she has never been in bed a day on account of her menses. Has all the care of her family, which she has supported for years, which has involved a great deal of labor and mental solicitude. About eighteen months ago she was advised to have oöphorectomy done as the only means to make her future bearable. The operation being insisted upon, she absolutely refused; she has had no professional treatment since and tells me today that she is perfectly well, which assertion is fully sustained by her mental and physical condition, as well as by the amount of work that she is doing.

Case II.—Married two years, aged twenty-two. One child nearly a year old. Gives a history of painful menstruation with the usual train of nervous and hysterical symptoms, previous to her pregnancy. Just before her marriage, after due consultation, oöphorectomy was advised, insisted upon, and refused. She is today the picture of a healthy young matron, and assures me that she is not even aware of the existence of her womb. I have never examined this case.

Case III.—Married, thirty-one years of age, mother of two children. Was one of the worst cases of dysmenorrhea that I ever saw. In bed about ten days of each month. All varieties of hysterical symptoms, pronounced hystero-epilepsy, nervous tone never being regained during intra-menstrual period, decided mental disturbances at all times. After being under treatment of gynecologists for years, with negative results, oöphorectomy was advised, with the absolute alternative of death or the asylum. Marriage occurred soon afterward. The woman is today, with the exception of an anteversion, perfectly well as far as her uterine condition goes, has a normal menstruation, no mental trouble, and is well known in the South as a leader of society and a woman of brains.

Case IV.—Has been reported by Dr. Lusk as follows: "The patient, when I first saw her a year ago, was a young woman of seventeen. She had been suffering agonizing pains at monthly intervals, and was confined to the bed or couch for the greater part of the time. An examination revealed occlusion of the lower vagina. An opening was made, and a large amount of retained blood and clots was removed from the upper vagina and uterus. The latter had been converted into a sac. For a long time thereafter the tubes remained thick and tender. This was especially marked on the left side, to which the fundus of the uterus was drawn by peritoneal adhesions. Salpingotomy was plainly indicated, and I should have performed that operation had I obtained the patient's consent. Finally, however, she married. My advice in the matter was not asked." Last June the young woman called upon me. She had been married a year, and was seven months pregnant. The thing was inconceivable, but it was a fact. I will simply add that labor was normal, and that this woman is today as perfect a specimen of physical health as I know.

The above is a brief *résumé* of the histories of the only four women that I have ever known that refused this operation. The time that has elapsed since it was advised varies from eighteen months to twelve years. I do not go into the details of the cases, as the only point I wish to make is that in each case the operation was advised and urged by gynecologists of standing, both North and South, consequently they must have been convinced that these were cases demanding operative interference. Please compare the results obtained without operation with the results that would have followed the best operative success. Think at what cost Cases II, III and IV would have figured as successful cases in the statistics of the gentlemen that wished to perform the operations, a possible sacrifice of marriage, and an absolute sacrifice of that greatest boon of all womanhood, maternity. Cases III and IV I have known most intimately since girlhood, and no language of mine can express the difference between what is and what might have been in these two cases.

In a practice of average size for twelve years I have had occasion to recommend the removal of the appendages but once, excepting cases of ovarian tumor. That one proved to be a case of pyosalpinx. Several of my patients have drifted into other hands and had oöphorectomy performed, and, as far as I can learn, have been disappointed in the results each time. The best men in this special line of work are doing this operation less and less each year. Their place is being amply filled by lesser lights, with smaller numbers of individual cases, but with a yearly aggregate that is terrible to contemplate. By what combination of circumstances could one man, to fame unknown, in a small interior city, and in a short space of time, find one hundred and forty-four cases demanding abdominal section?

Any one desiring to follow up the line of thought suggested in these cases will be interested in the following articles: "The Remote Results of the Removal of the Ovaries and Tubes," W. T. Lusk, *American Journal Obstetrics and Diseases of Women and Children*, Volume XXIV, Number XI; "The Abuse of Oöphorectomy in Diseases of the Nervous System," Allen McLain Hamilton, *New York Medical Journal*, February 18, 1893; "Abdominal Surgery and its Evolutions and Involutions," Joseph Eastman, *Journal American Medical Association*, March 11, 1893.—Dr. H. McHatton in *Annals of Gynecology*.

MEDICAL MELANGE.

THE ORIGIN OF CIRCUMCISION.—*La Médicine moderne* states that at a recent session of the Paris Society of Anthropology the question of the origin of circumcision was discussed. M. Letourneau recalled the custom of the Egyptians of practicing phallotomy on the vanquished. This custom still persists in our day among the Abyssinians. Every warrior who has killed an enemy, says James

Bruce, presents to the chief a bloody prepuce. The ceremony being concluded, each warrior gets back his bloody trophy, and, taking it home with him, prepares it in the same fashion the Indians employ for scalps. This custom existed among the Hebrews, and to become the son-in-law of Saul David had to bring in the foreskins of a hundred Philistines. Ritual circumcision is thus derived, and was an act of homage to God. The usage of offering portions of the body to the gods has been and is yet very widespread. It is a symbol of a complete sacrifice that has become partial by the lessening rigor of morals. It is thus that blood or the fingers were offered, or the sacrifice of their hair, by the early Christians.

THE ORTHOGRAPHIC MANIA.—This is the manner in which the *Medical Press and Circular* grows wroth over a change proposed by the *Medical News:* Among some worthy persons in America a positive mania exists for reforming (?) the orthography of the English language. The extent to which this mania is displayed is well illustrated in a paper which was read before the meeting of the American Medical Editors' Association in Milwaukee last month. The paper was entitled "The Spelling of some Medical Words," and here is an example of the philologic rhetoric in which the writer indulges: "The stupidest, most disgusting thing in the world, is the brute conservatism that refuses all change, good or not good, from stolid, unreasoning desire for things as they are. Better chorea, ay, better epilepsy than absolute paralysis. Conservatism is the sham coyness of linguistic old-maidism; the crinolin fig-leaf of philologic prudery, a fig-leaf, too, not the result of too much, but of too little knowledge—indeed, of an abysmal ignorance of the history of the language"(!!). After this maniacal outburst we almost feel in the condition of the shy young person whose self-consciousness is so distressing when spoken to by a stranger that he does not precisely know where to look. Hitherto we have been in the position of Adam and Eve in the Garden of Eden, to whom fig-leaves at first were unnecessary; that is to say, we have been living in perfect innocence and unconsciousness of the fact that any such tirade as that quoted above could be deluged upon the orthography of our language. The most disturbing part, however, of the writer's invective is his positive assertion that all this time we have been wearing a fig-leaf, and have practically been sojourning in a fool's paradise without knowing it. His reference, too, to the "sham coyness of linguistic old-maidism" is scarcely complimentary to the prototype implied in this observation; nevertheless we are glad to see that his due sense of propriety has led him to endow his "linguistic old-maidism" with a fig-leaf of "crinolin" dimensions, instead of one of the size with which Adam and Eve were compelled to be satisfied. This was certainly very thoughtful, and distinctly shows that there was method in his madness; but in ascribing his "crinolin" fig-leaf to the result of too much than of too little knowledge, it must be confessed that this simile tends very largely to upset the usual sentiment which has from the time of Adam been associated with the object and aim of that useful piece of foliage. However, coming now to the main reasons which impelled the writer to indict his remarks, we find that he has taken certain rooted objections to particular letters in the alphabet, which appear to him to have no business in certain words. For example, he absolutely despises the diphthong "æ" in words such as hæmorrhage, anæsthesia, orthopædic, and insists that these should be spelt with an "e" namely, hemorrhage, anesthesia, orthopedic. Again, he asks "the profession to accept certain tiny, innocent little changes in a very few words they use." These changes imply the cutting off of "al" at the end of many adjectives; for instance, chemic instead of chemical, biologic instead of biological, physiologic, instead of physiological, et cetera. Furthermore, he say: "After four years of careful investigation and great labor, the American Association for the Advancement of Science has adopted a set of rules for the spelling and pronunciation of chemic terms. Among these rules are those advocating the dropping of the final *e* in all such words as *bromid*, *iodid*, *chlorid*, and the like, and also in all such as bromin, iodin, chlorin, and so fourth. Is there any reason, earthly or unearthly, for not following the suggestion?" We cannot profess to any precise knowledge of unearthly reasons, but it seems only reasonable to suppose that "id" would have the same signification as the word "hid" pronounced by a cockney without the aspirate; whereas "ide" is undoubtedly the same as "hide" when the cockney again misconducts himself with the letter "h." Thus it is difficult to see how "bromid" could still be called "bromide" supposing this new fangled form of spelling be introduced. Lastly, the writer asks, "Why shall we not drop the conjoined letter diphthongs in all words? Let us spell all our words drawn from the Greek "*aima*" with the single vowel *e* instead of "æ" . . . let us also accept *edema*, *celiotomy*, *diarrhea*, *fetus*, and so forth. Let us adopt, with never a wry mouth, the "American spelling" of *honor*, *center*, *meter*, (all the meters and liters!), *program*, and the rest." Emphatically, No. We are by no means enamoured of "American spelling." If the only reason which can be urged for dropping the final *e* in *bromide* is that the word is easier to write without the *e*, then it can only be said that this is no argument at all for introducing such a change. Slovenliness and laziness in writing would appear to be the real and sole reason to account for the barbarous "surgery which is being practiced upon English orthography in the United States at the present moment.

COMMERCIAL MEMORANDA.

HERPES ZOSTER.—Dr. Ohmann-Dumisnil, in a valuable article on herpes zoster in the *Quarterly Atlas of Dermatology*, recommends Peacock's bromides as a nerve sedative when the prodromic symptoms appear.

SENNINE, "the new American antiseptic," is a product of phenol and boracic acid, the two best germicides known. It is comparatively inexpensive, nonpoisonous, and free from disgusting odor. Sennine promises much in general medicine as well as in surgery.

THE DOCTOR AND THE JANITOR.—The *New York Medical Journal* says: The newspapers lately gave an account of an incident that shows one of the attractive features of appartment houses. It seems that two sisters were living together in a "flat," and that during the night one of them went out to get a phosician to visit the other, who was sick. When the lady got back to the house, accompanied by the doctor, she was accosted by "the lordly janitor," as the *Sun* calls him, and told that that was a respectable house, and she could not bring a strange man into it at night! And then, the account goes on to say, the janitor actually ejected the physician.

EVERY physician should send to the Malted Milk Company, Racine, Wisconsin, for one of their new and useful desk tools, a ruler, measure and paper cutter combined. They are sent free and postpaid to any physician on application. Liberal samples of Horlick's malted milk will be sent also to physicians who wish to give this food a trial in their practice. It is an excellent preparation for use as a diet in typhoid fever and all wasting diseases, for debilitated conditions and digestive troubles, affording as it does all the elements of nutrition in a concentrated yet very pleasant and easily assimilated form.

SOUTHERN PINES, MOORE COUNTY, NORTH CAROLINA, is a new winter health resort just coming into prominent notice. It is located in the high, dry, long-leaf-pine sand hills amid the tar, pitch and turpentine district. Thousand of Northern invalids have visited the place and many remarkable cures have been effected. Prominent physicians have visited the place for investigation and without a single exception say it is the best in the United States, and we are specially requested by Mr. John T. Patrick, Commissioner of Immigration for the Southern States, to invite physicians of the Northern and Western States to visit the place and investigate in the interest of their patients. Any physician desiring information can address Mr. Patrick at Pine Bluff, North Carolina.

DR. CYRUS EDSON, in the October issue of his *Doctor of Hygiene*, compliments our enterprising confrère of friable pill fame in the following terms: "In Kalamazoo, that Michigan town whose name carries with it a queer sensation of Indian tomahawks and gore, we first met Dr. Upjohn, whose name has since then become a synonym for pharmaceutical excellence. Who has not seen that great thumb crushing to a powder a pill which, if made by ordinary processes, would have required a hammer to reduce to the same condition? By what magician's trick he has succeeded in coating a powder and producing a pill, it is hard to say, but the fact remains that within the slight and perfectly soluble sugar coating of an Upjohn pill may be found the proper medicament in a perfectly loose and friable condition."

USES OF PHENACETINE.—The *National Medical Review* reports the following in its summary of proceedings July, 1893: "The speaker told of the great value of phenacetine. It is very beneficial in the early stages of pneumonia, especially for the relief of pain—the pleuritic pain. Phenacetine will stop the pain better than opium or morphine. Opium is a dangerous drug to use in this disease. Phenacetine reduces the pain, dilates the vessels, and sends the blood to other parts and so relieves the local congestion." In an article entitled, "Cold Baths and Cold Tar," by Dr. Oscar H. Merrill (*Medical Record*, May 13, 1893), the writer said: "In many cases it will be found impossible to get any benefit from baths. In such cases the patient may be much benefited by having one or two doses of phenacetine each day. It is now established, however, that baths with internal treatment are valuable in many cases, and that it is irrational to use one treatment to the exclusion of the other. Intelligent people can be taught in an hour to use the thermometer and to administer phenacetine or baths with correctness." Dr. Merrill cites a case of typhoid fever in which fifteen-minute baths, followed by phenacetine, "kept the temperature within reasonable limits for ten hours."

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

TYPHOID FEVER: ITS CAUSE, PATHOLOGY, AND TREATMENT.*

BY A. N. COLLINS, M. D., DETROIT, MICHIGAN.

[PUBLISHED IN The Physician and Surgeon EXCLUSIVELY]

IN bringing before you for discussion to-night the trite and frayed subject of typhoid fever, an apology is due. Our journals are full of it; the secular press is full of it; and my esteemed hearers and fellow-workers are full of it; and yet I fear our çruise of knowledge, of facts, of causation, and of armament to combat and annihilate it is not so full as we might wish.

The hasty and imperfect study, which limited time and circumstances beyond my control have given me to study this subject, has convinced me that much is yet to be learned of this important fever. Much that pertains to its origin, its management, and more—far more—to its prophylaxis. Of the importance of this fever to us as the preservers and keepers of the human race, little need be said to any thinking member of our profession. It is the *important* disease of our century and of our civilization. Typhoid fever is to the adolescent and the young man what diphtheria is to childhood—the most dreaded of our diseases of today—which are not broadly epidemic.

When we consider that previous to the year 1836 the distinction between typhoid and typhus fevers was not known, we can truly assert that it is, at least so far as recognition is concerned, a disease of our century and almost of our generation. The distinction between these two diseases appears to have been first accurately made by GERHARDT and PENNOCK, in Philadelphia, in 1836, still more fully demonstrated by STEWART, of Glasgow. Subsequently professional doubts were set at rest by the careful clinical and pathological studies of SIR WILLIAM JENNER, at the London fever hospital in the years 1849 to 1851. Since 1851 much has been learned of the cause, pathology and treatment of this disease; much has been learned in studying these of its prophylaxis, but with all that the careful researches have given us we can safely make the statement that never in our history has this fever been so widespread and alarming as during the past two years. Notwithstanding our more perfect knowledge of the disease, which has received many additions thereto of late, it has increased, seemingly setting at defiance our boasted wisdom and extending from the arctic regions to the equator, not permitting to escape such remote and primitive communities as the Norfolk Islands in the Pacific Ocean, and the Fiji Islands.

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* Read before the DETROIT MEDICAL AND LIBRARY ASSOCIATION.

Vaccination has seemingly throttled that once terrible scourge, small-pox, so that now many middle-aged members of our profession never saw a case of the disease. Our nearly perfect knowledge of the cause, pathology, and treatment of cholera has seemingly made us its masters in this country at least; through our efficient quarantine, a threatened epidemic which, judging from all previous experience, seemed almost sure to come upon us has been averted. May we not hope and work with confident expectations of eliminating from our death lists typhoid fever? If we are to do this we must do it through perfect understanding of its causes, thereby preventing its development and continuance among us.

From the causes of any disease we must deduce our system of prophylaxis. Logically, then, knowledge of causes must precede prophylaxis. It is probable that typhoid fever has come down to us from remote ages, though of this we can have no certain knowledge as it was not differentiated from other fevers till well into the middle of the present century. We may now take it for granted, I think, that the *sine-qua-non* of typhoid fever is the introduction into the system of a specific infecting agent. To make this cause active we need only to add a favorable environment for its development and activities. We may have many predisposing influences which bring the required contact between the poison and the organism poisoned, yet they can hardly be ranked as causes. Among these predisposing influences we have foremost a susceptibility to the poisons—

(1) All influences which favor the development, cumulation, and activity of the poison.

(2) Influences which favor or increase susceptibility to the poison.

Of the first we have filth-decaying organic matter, sewers, cesspools, damp cellars; but no doubt nearly all these sources of poison must be first contaminated with human excreta, as so far as we know, it is from the human alimentary canal that the poisonous principle must emanate. We have no evidence of typhoid fever in any animal other than man except the horse, and that is open to grave suspicion as not being true typhoid. The influence of seasons seems to bear a part in typhoid fever, but probably aside from its development and distribution of the germs has little bearing. Wet weather, early scattering the germs, followed by hot, dry weather favorable to their development no doubt has a bearing upon the amount and diffusion of the poison.

All means which favor the transportation of the germs from their nidus to the system of man—as food, water, and air—may be considered predisposing influences. Manner of life, age, new conditions, and exposure to the germs may be so considered. But the *exciting cause*, as we have stated, according to the pretty well settled opinion of our profession, is the specific pathogenic germ—the bacillus typhosus of EBERTH, found constantly by him in the liver, spleen, and Peyer's patches in cases of typhoid fever. GOFFKY and KOCH found the bacillus in the organs named, in the blood, and excreta, in twenty-six out of twenty-eight cases examined. This bacillus seems to be the only one constantly found in this fever and no other. The doctrine that this bacillus may develop *de novo* seems untenable. Yet we have evidence that possibly the ever-present bacillus coli communis, which is normally found in the colon, may undergo changes outside the body and become the true bacillus typhosus of EBERTH. This, were it true, would make all human excreta as much to be dreaded nearly as excreta from a typhoid fever patient and is very important, as we have heretofore regarded as dangerous only the typhoid fever patients' excreta. But water contaminated by fecal matter not typhoid may give rise to typhoid fever, if the conclusions of RODET and ROUX be accepted. This germ when introduced into the system is capable of infinite reproduction under favoring conditions. That it is eliminated with the fecal discharges is a consideration in our treatment. Its powers of retaining its vitality under varying condition is very great and an important consideration in our defense against its ravages. Its most favorable habitat seems to be in decaying, moist organic matter, notably excrementitious matter. It remains indefinitely in cesspools and privies and favorite places and may, in this undeveloped state, be conveyed about by many means. Probably water, milk, and currents of air with noxious emanations are its most frequent mode of transit from its habitat to the organization of man. Milk that has not come in contact with impure water or impure air cannot be infected.

The fact that this infecting germ retains its vitality and is capable of multiplication in water is of paramount importance to us. PRUDEN found that after having been frozen in ice for one hundred and three days, and after having been heated to a temperature of 132.8° Fahrenheit, it was capable of growth; also that its vitality was not impaired by repeated freezing and thawing.

Its period of incubation has been in one instance at least fairly proven not more than four days after infection, but this is largely speculative. Our proof that the cause of typhoid fever as furnished us by our bacteriologists seems conclusive. It remains for us to learn how the bacillus so affects the human organism as to produce the picture we see in our typhoid fever patients.

The pathology of typhoid fever should, rationally, as in all other diseases, be our guide to treatment—if medicine is to rise above empiricism and take its place among the sciences. The spores being taken into the body by way of the mouth find their way into the stomach and there, we may well believe, many are overcome by the acid juices of a healthy stomach and are destroyed. If not destroyed by the stomach they pass on to the alkaline contents of the intestines and gain admission to the system by the intestines. They are taken up by the lymphatics of the intestines. This is shown in cases examined post-mortem. In the early stages of the affection the lesions are confined to the lymphatics of the intestines They immediately colonize the solitary glands and Peyer's patches. From these primary colonies they invade the intestinal lymphatics and by way of these vessels reach the mesenteric ganglia, and entering the radicles of the superior mesenteric vein reach the liver where they are distributed by the general blood current. Finding them as we do only in certain portions of the body we must look further for the general and subtle influence which seems to pervade every fiber of the body. We find explanations of these symptoms in the recent discoveries of our chemists: That in all infectious diseases the special pathogenic microörganisms produce the definite chemical poisons called ptomaines, and in the light of the discoveries of HOFFA, BRIEGER, VAUGHAN, and others the relations between these germs and the symptomatology of the diseases which they cause become plain. Thus we see it is not the organisms that give us the multiple symptoms of typhoid fever but the poisonous ptomaines elaborated by them in their growth and development. It seems probable that some of the changes such as we find in the glands and follicles result from the organisms themselves, but the fever, relaxed capillaries, dilirium, and dilated pupils no doubt are due to the ptomaines. In typhoid fever we have special anatomical lesions which are always found and which enable us to assert with positiveness when found post-mortem that the patient suffered from typhoid fever. These lesions may have had little to do with the death of the subject but they are pathognomonic of the disease. Thus we have two classes of pathological lesion—one produced by the bacilli and their concentrated poisons, the other lesions not the result of local lesions but of general poisoning, which largely consist of degenerative changes in minute structures in various organs throughout the body—as the heart, voluntary muscles, liver, kidneys, solitary glands, et cetera. From the causes we find the numerous changes throughout the body—ulcerations and degenerations of the mucous membranes, degeneration of muscle-fibres in the voluntary and involuntary muscles, in the heart; parenchymatous degenerations of the liver cells, kidneys and spleen. The changes are many and to detail them would be wearisome. I fear many of these pathological changes are common to all continued pyrexias and subject to common methods of their treatment.

The treatment of typhoid fever reminds one of the saying: "A man should choose his own grandfather." It should begin in prophylaxis before the fever is present to treat. But our treatment is in reality prophylactic in a large degree. We cannot escape the conviction that the dangers of this fever lie in a long period of pyrexia causing many pathological changes—probably most of the degenerative changes which take place in the various organs. To reduce the temperature and thereby prevent the degenerative changes is truly prophylactic, only one step less remote than preventing the course of the fever exerting its influences. The subject of prophylaxis is a very broad and important one. In fact the most important pertaining to this disease, for in preventing the disease we must look for our greatest achievement.

Two broad sources of infection need more careful consideration than has yet been given them, namely, *our water supply* and *the disposal of human excreta.* I have but little doubt if the human race could be supplied with an abundance of pure water, and the excreta from every human being burned soon after being voided, typhoid fever would vanish from the earth.

These are simply speculative whims, but in them we find the direction in which our practical efforts must trend. I believe too much confidence is placed in the purifying powers of large bodies of water into which sewerage from multitudinous cities and towns pour their filth and disease germs. Our own supply of water—though it may be better than our neighbors, and the best practicably obtainable—is not to be overlooked in considering the great increase of typhoid fever in our city during the past two years.

In treatment I shall simply give a short outline of one I have followed for some time. It is not new and it is certainly not original. I shall not attempt to discuss the merits or demerits of many things mentioned but hope the subject will be fully discussed by many who are older and have more experience to guide their conclusions.

I have learned to prize very highly the nitrate of silver treatment of PEPPER who makes the statement that in ten years' practice he has never lost a case of typhoid fever and attributes his success to the nitrate of silver treatment. I follow a plan of immediately putting to bed all suspected cases even before I am at all certain of my diagnosis. It seems much safer to do this. My plan is to move the bowels freely, if the patient is seen early, with calomel. Most cases need this and acting on the idea that the more perfectly we can eliminate the bacilli from the intestinal tract, and keep them eliminated, the less of the ptomaine will be formed to poison our patient. If the bowels are not too active, and they rarely are when the nitrate of silver is given early and continuously, I give a dose of calomel every second day, modifying this rule as all others to meet the particular conditions present in the case. I can hardly find a satisfactorily scientific reason for the seemingly beneficent action of the nitrate of silver. It tones up the mucous membrane and may possibly exert an influence upon the nervous system. As it is absorbed through the same paths which are taken by the bacilli it may not be too much to think it has a healing and tonic action upon the diseased structures.

My intestinal antiseptic is thymol made into pills of two and one-half grains each and given every four or five hours. In this we have a most powerful germicide, and if the pills are hard and immediately followed by a glass of water no doubt soon pass the stomach and we may at least feel that we have something there to annoy the germ.

A most important point is our means of keeping the temperature down. The results show the baths, as practiced in our hospitals, to be very effective and no doubt are the best means at our command. In private practice where attendants are awkward and stupid, and where no facilities are at hand to judiciously use this method, it is hard to have them given. I have not given them, but in all cases have resorted to very frequent sponging, which I have found very valuable indeed. Phenacetine and salol have been the antipyretics mostly employed. Have used acetanilide almost as extensively. If judiciously used I believe them safe. When diarrhea is exhaustingly profuse, which I have seldom seen, salicylate of bismuth has proven valuable.

Milk diet carefully given I believe to be the best diet in the main, supplemented by malted milk, chicken broth, and liquid peptonoid.

In nearly all cases I have used alcohol in moderation. One remedy I have found particularly useful in the convalescent stage when, owing to long distention and weakened muscular coats, the intestines fail to act and we have great torpor of the bowels—Stearns' aromatic cascara has proved of much value. In coffee, which I have used, I think we have an excellent stimulant.

In all I have treated fifty-eight cases on these general principles without a death. Among my own cases I just escaped one death by transferring one patient to Harper Hospital after having him under my care for three days, but he had not been put upon the above treatment. As soon as the diagnosis was made he was sent to the hospital where, three days later, he died very unexpectedly of meningitis. In the fifty-eight cases reported three had hemorrhages from the bowels—two very profuse and dangerous. Ergot, or rather Parke, Davis & Company's new preparation of ergot, was used hypodermically with satisfactory results.

In most cases I have used turpentine emulsion during the latter part of fever and at times when there was much tympany during convalescence.

THE RELATIONS OF OPERATIVE GYNECOLOGY TO INSANITY.

By A. H. McFARLAND, M. D., Jacksonville, Illinois.

[Published in The Physician and Surgeon exclusively]

The ideal aim of the progressive alienist should be the solution of the great problem of the physical foundation of insanity. In the language of Dr. Maudsley—

"We recognize how entirely the integrity of the mental functions depends upon the bodily organization, and as physicians we cannot afford to lose sight of the physical aspects of mental states if we would truly comprehend the nature of mental disease. We recognize the existence of an intelligent mental force, linked in harmonious association and essential relations with other forces, but leading and constraining them and led and constrained by them in its manifestations."

Spitzka makes the following statement:

"Disordered states of the pelvic organs have been supposed to play an important part in the causation of insanity. It is known, however, that the grossest lesions of the uterine region are not usually complicated by such mental disturbance as justifies calling it alienation. Those pretty cases, in which a delusional insanity is instantaneously cured by restoring a retroflected or retroverted uterus to a normal position, do not seem to occur nowadays, and the gynecological epoch of psychiatry seems to have passed by, taking its adieu with the sacrifice at the Blackwell's Island Asylum of Mary Ann Mullen, a sufferer from unrecognized katatonia on the altar of oöphorectomy. It would have been as reasonable to extirpate the bedsore of a sufferer from paretic dementia, or cut off the hematomatous ear of a terminal dement, with the hope of curing his insanity thereby."

(a) "The continuous and very considerable increase of insanity throughout our country, and the somewhat discouraging results of treatment, have led to dissatisfaction and to seeking after new ideas and methods, and this tendency has been further stimulated of late by the great advances in neurology, neuropathology, psychopathology and operative cerebral surgery. This general recognition of the defects of present methods, and search for newer and better ones, has, like all things human, its good and evil side. It is undoubtedly a good thing in itself, but there has been a disposition, on the part of more recent converts to an interest in nervous and cerebral diseases, to discard all past and present ideas as antiquated and insufficient, and to form extravagant expectations of results from newer appliances, while, at the same time, those already occupying the field have been perhaps too little aware of the possibilities brought within reach by the rich discoveries of recent years. These facts are illustrated by the abortive movement, inaugurated a short time ago in London, to establish an

(a) Dr. Richard Dewey.

asylum for the insane to be solely managed by a visiting staff of specialists in various branches with not a man among them connected with any institution for the insane, or possessing a practical knowledge of the care and management of the insane, and there are numerous illustrations of the same kind in our own country. The men engaged in private practice in the specialties of brain and nervous diseases on the one hand, and the men in charge of institutions for the insane on the other, have, in times past, affiliated to only the slightest degree, and have misunderstood each other. And, furthermore, the former have furnished most striking illustrations of their practical ignorance of insanity and its management, marked by calamitous results among their patients, while the latter have been found wanting in the scientific spirit and have too often been absorbed in purely administrative matters, while the rich opportunities for pathological study and for original research have failed to be improved."

L'uterus c'est la femme is a proverb which has received a new development in these days; for if, by courtesy rather than by conviction, woman be granted the possession of a few subsidiary organs, these, at best, have no prerogative nor any order of their own. The uterus has its maladies of local causation, of nervous causation, and of mixed causation, as other organs have; but to assume that all uterine neuroses, or even all general neuroses in women are due to changes in the uterus, is as dull as to suppose that the stomach can never be the seat of pain, except it be the seat of some local affection. It is a fact, that while pelvic and abdominal diseases of women are more frequently and intelligently recognized by the profession now than formerly, it may also be affirmed that more women, ten to one, have been consigned to hospitals for the insane, victims of needlesss or unskillful surgical operations, performed by ambitious and pretentious gynecologists, than have ever been restored to reason by the most commendable and skillful abdominal surgery. It is not denied that insane women are capable of suffering from local disorders, and that surgery offers no hope or amelioration to these unfortunate women. While it is true that in certain insane women a state of anesthesia may exist, masking conditions so that no suspicion of their nature is entertained, and in others, hyperesthesia makes the most trivial ailments appear as serious, still I feel sure that a large number of mentally sick women suffer, and are conscious that they suffer, from some local disorder manifested to them in the form of pain or irritation.

Hysterical mania is not an uncommon complication of the diseases of women. Two months ago such a case came under my observation, with the following history: Mrs. H., aged thirty years, admitted to hospital February 7, 1893, married four years, three children, no history of insanity in the family. Birth of first child produced laceration of third degree. Perineorraphy was performed two months after delivery, leaving the patient in a weakened and nervous condition. WHITEHEAD's operation, to which she submitted under protest, was then performed. Within two months she became so insane that a verdict was easily obtained. My diagnosis could be easily made as a case of hysterical mania, aggravated by a local treatment of a year, and two unsuccessful operations.

Dr. J. M. BALDY read a paper before the American Gynecological Society on "Insanity Following Laparotomy," in which he gave statistics from the Insane Asylums of Pennsylvania, in regard to the number of patients received after laparotomy. From eighteen institutions he received reports of fifteen cases, and reported one of his own for rectocele, after which the patient developed melancholia, and another, having chronic confusional insanity after oöphorectomy.

Dr. Martin cites several abdominal operations of his own upon insane women, namely: the removal of appendages for recurrent mania; result—moods as variable as before and mental confusion took the place of previous excitement. Salpingo-oöphorectomy for grand mal with dementia; result—no appreciable improvement occurred in the nervous condition. Large ovarian tumor removed for delusional insanity; result—patient succumbed to exhaustion four days after the operation.

The questions to be answered are: Are the results lasting? Is the patient's condition definitely and permanently benefited, and will she continue to regard the operation as a blessing? That it is so constantly the case as to constitute a justification for an operation, in the absence of urgent and direct symptoms, remains to be proven.

Under the term "delirium traumaticum nervosum" the older surgeons described mental symptoms which made their appearance after surgical operations. The symptoms consisted of great motor agitation, and visual and auditory hallucinations, and rarely symptoms of a violent or stuporous type, from which the patient may recover or remain permanently insane. Four possible dangers should be considered:

(1) Previous insane taint.
(2) The anesthetic.
(3) Fear of the operation.
(4) Sepsis.

I do not believe one factor sufficient to account for a serious result. Having in the first place a predisposition to nervous development, the patient needs but a straw to carry her past the line of sanity and the shock of the operation furnishes this. Insanity caused by anesthetics and antiseptics cannot be considered in the limits of this paper. It must be mentioned, however, that ether in some patients having a predisposition might bring on insanity.

It is gratifying to know that at last gynecology and neurology are in accord and that henceforth women are to be treated in a rational way for their neuroses. The chief medical error of the present day is the mistaking of brain disease for pelvic disease, and the prayer of the neurologist in behalf of the neurasthenic woman is for rest for her whole organism from needless irritation and unnecessary gynecological operative disturbances. This does not include a protest against the treatment of the real consequences of gynecic disease, nor of those uterine disorders which are the result of neuropathic disorder, the hyperemias, hyperplasias, morbid growths, grave traumatisms and displacements. These are surely numerous enough to keep gynecologists employed.

(b) "The clinical fact is, that many women require both the conservative gynecologist and the most skillful of neurologists to successfully conduct their cases. A rational gynecology, that recognizes woman as a being possessed of other than a uterine system to account for some of her manifold ailments, is henceforth to prevail.

The day of gynecological errors is waning; a light shines from behind the

(b) *Alienist and Neurologist.*

cloud. It is the ray of the neurological sun, through which clouds the day dawns for woman's emancipation from the misery of medical error, and a true neurological gynecology is born into the family of clinical and therapeutic science.

CONCLUSIONS.

(1) Gynecological operations are more likely than any other surgical procedures to disturb the mind.

(2) Hereditary antecedents of the patient should always be determined.

(3) In insane patients operations should be performed only when the physical condition endangers or renders life insupportable.

(4) Patients, precedent to the operation, should be in a calm frame of mind; hence, moral treatment of the patient previous to operating is the very best prophylaxis.

(5) Inherited and acquired insane constitution is the fundamental factor in most cases of insanity. This conclusion does not, however, justify us in ignoring physical diseases immediately preceding or associated with insanity.

(6) Healthy genital organs do not give rise to reflex symptoms, consequently caution should be exercised in operating for the relief of insanity.

(7) Operations may be satisfactory in properly selected cases.

LECTURES.

EXCISION OF THE RECTUM FOR CARCINOMA.

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The patient before you is a married man, forty-six years old, a gardener by trade. He has always been healthy until the past year. Last spring he began to be troubled with oxyuris vermicularis or "seat worms," which were very irritating. While scratching one day he noticed a tumor, about the size of a hickory nut, which was not very sensitive at first, but later it became very painful. He has not defecated for four months without an enema. His appetite is very good, but eating is interfered with on account of severe pain at stool.

I have not had the opportunity of examining the patient thoroughly on account of the severe pain induced by the attempt. The patient being under the anesthetic I will proceed to make the examination. I find the anus is involved, and upon introducing my finger into the bowel I find the anterior as well as the posterior part of the rectum is involved—the latter almost as far as I can reach with my finger, but the surrounding tissues do not seem to be infiltrated to any great extent. The sphincters are involved to such an extent that their removal will be necessary. I also find the prostate gland slightly enlarged.

This examination shows the desirability of an operation. The reasons for operating in this case are the constant and severe pain at stool; the inability of palliative treatment to give relief; the malignant nature of the growth allowing the patient only a short life if not removed, and the patient's desire for relief by operation. The dangers have been fully explained to him and he has been told that complications may arise. We must guard against opening into the peritoneum and the peritonitis following. Some surgeons open the peritoneum purposely to determine the extent of the disease and pack with iodoform gauze. The bladder may be injured, the urethra torn or cut, or the prostate gland injured —any of these complications may result seriously. We have a number of different operations to choose from, prominent among them being Kraské's, Kocher's, or the older methods. Kraské puts the patient on left side instead of in the dorsal lithotomy position. An incision is made along the sacrum a little to the left extending nearly to the anus. The soft parts are dissected off, the coccyx is excised and the sacro-iliac ligaments divided close to their sacral attachments. The rectum is now readily accessible and may be still further exposed by chiselling off part of the left side of sacrum, being careful not to go above the third sacral foramen. The other operations vary only slightly.

I shall not follow strictly any of the above operations today, but use a modification of—you might say all of them. If I find it impossible or inadvisable to excise I will perform inguinal or lumbar colotomy to relieve pain and delay the probable perforation of the bladder by the growth. The patient, as you see, is placed mainly on his right side, allowing both hips to be elevated, the left being slightly the higher. Even though we may not be able to have the wound perfectly aseptic, we take the usual antiseptic precautions. I make my incision from a little above the middle of the sacrum, going down and encircling the anus. Now I dissect back the soft parts—my assistants stopping the hemorrhage as rapidly as possible, as we may lose a great deal of blood before we get through. I cut through the articulation of the coccyx and remove it with sequestrum forceps. The bowel is now exposed and I introduce my finger into the rectum and place a "provisional ligature" through the bowel *above* the growth. Now we will have some one introduce a sound into the bladder to prevent accidental injury to the urethra. Next I make an incision with scissors above the growth, being careful to protect my "provisional ligature," my finger still being in the rectum. The vessels are being tied off as fast as they are cut to prevent hemorrhage, the upper part of the bowel being caught with "suture-ligatures." The diseased portion of the bowel is now excised by carefully dissecting it away from the base of the bladder, prostate gland and urethra for nearly three inches. I have taken away about three and one-half to four inches of the bowel, including the sphincters. I now bring down the bowel and suture it to the muscles and skin at the upper part of the incision. The wound is next partially closed with interrupted sutures and packed with iodoform gauze.

Note.—The patient stood the shock admirably, the temperature the next day being 99.8°, and only on two or three occasions has it reached over 100°. Enemata have been given and patient has defecated with but little pain. The bladder was emptied spontaneously on the first and sixth day after operation; intermediately it has been emptied by the catheter and washed with warm saturated solution of boracic acid. On November 20, seven days after the operation, the temperature was 98.6°, the patient was feeling "*very* well," passing urine spontaneously and regaining strength.

THE ETIOLOGY OF HEMOPTYSIS.

By PROFESSOR GERMAIN SEÉ, PARIS, FRANCE.

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HEMORRHAGE from the mucous membrane of the lungs, which is so very interesting as regards its treatment, seems to be less so when its cause is examined. This is a great error. Sometimes, of course, its etiology is quite evident when we find certain signs that prove the existence of pulmonary tuberculosis, but outside of the danger itself that may come from the hemorrhage, which, by the way, has been much exaggerated, we should endeavor to find out if this bleeding will continue, if it will return again, or be followed by serious consequences or not, or if it is simply accidental.

LAENNEC was the first to show that hemoptysis may be only a symptom of tuberculosis or pulmonary apoplexy. **GRAVES** divided it into two classes, according as it came from the bronchial or pulmonary arteries. In the present state of our knowledge let us review the etiological distinctions on which the whole interest of the diagnosis depends.

Hemoptysis has been divided into essential and symptomatic. By the first we understand those that do not depend on any disease of the lungs or other organs. These are rare, and their causes are quite well known. They depend on traumatism, such as the irritant action of certain forms of gas when respired, and on intense cold which brings about a high tension in the pulmonary vessels. In this class has been ranged supplementary hemoptysis which is seen only in women. But all these cases are quite easy to diagnose and establish the etiology, so they need not detain us.

Among the symptomatic varieties the most important is that seen in pulmonary tuberculosis. It may be noticed at any period of the disease, but is most frequent at the onset. A person apparently in perfect health, but who has had a little dry cough now and then, is suddenly taken with hemoptysis. Sometimes it is only a sanguinous expectoration mixed with salivary sputum; at other times the patient is awakened by finding his mouth full of blood and red marks are on his pillow. We must not be in a hurry to share his fears, because it may be only a sanguinolent exspuition which must not be confounded with expectoration of blood, for this exspuition is sometimes simply the rejection of matters accumulated in the pharynx, or naso-pharynx, or even in the mouth. An examination of the buccal cavity shows that exspuition is more abundant during sleep, owing to unconscious efforts we make then by a sort of succion. Real hemoptysis takes a patient suddenly, without any definite cause, unless it be a cold bath or some sudden effort. With a slight cough they expectorate clear red blood, which is mostly liquid and frothy. This expectoration, which is at first abundant, continues for some time, even several days. The blood, which is at first red, then becomes darker by having remained longer in the bronchial tubes. Given these conditions, the fate of the patient remains variable according to the case. Sometimes this symptom may be the only manifestation of disease, as it may not continue, owing to the fibrous transformation of the tubercles. But this is not always so, as this hemoptysis may be the first stage of phthisis, which, however, may not come on for a long time afterward, even when the first attack of hemoptysis has almost been forgotten. Then there are cases where the evolution of the tubercular bacilli may go on at once.

The relatively benign character of hemoptysis makes its diagnosis as to the gravity of the case difficult. If auscultation is practiced soon after the attack it can give an idea of the seat of the hemorrhage in the lungs, but can tell us nothing of its nature. The microscopical examination of the sputum which alone can decide the question may not be possible for sometime or may give false results. In most cases the bacilli are not abundant at this stage of the disease, but this must not lead us to think that it does not exist. In all cases of hemoptysis that cannot be explaned by some heart lesion, or renal affection, or again by some general malady, we should suspect tuberculosis. The frequent absence of bacilli in these expectorations and in those of harmless sorts of hemoptysis, has led HUCHARD and others to search for the etiology in arthritism. But this diathesis cannot be admitted in hemoptysis among those who do not appear to be tubercular, until after the careful examination of the chest and sputum for bacilli, and the fact that you do not find them in such blood does not prove that the case is not one of commencing tuberculosis. As we stated before, it is not usual to find Koch's bacillus in this blood, and it is known that the blood of a confirmed consumptive does not contain bacilli. The absence of physical signs over the thorax is not a proof that tuberculosis does not exist. A case of hemoptysis recorded by HUCHARD, where no lesion of the lungs was found at the autopsy, does not prove that there was not some vascular lesion.

SIR ANDREW CLARK thinks that hemoptysis seen in aged persons comes from arthritism and relates the details of two autopsies to prove that no lesion was found in the lungs, nor any cardiac alteration. We may, however, ask if the fact that these patients had rheumatic antecedents is enough to declare this as a cause of the hemoptysis seen? DUCLOS (of Tours) and other authors have reported a number of cases of patients who had hemoptysis and arterio-sclerosis. These writers had been struck by seeing quite a number of cases of hemoptysis in apparently robust people who were arthritic. On following up these patients it was seen that after a few years they were attacked, some of them by rheumatism, others by arterio-sclerosis, and again others by nephritis. From these observations, we think that a large number of such cases, when there has been hemoptysis that cannot be explained by any chest lesion, are due to some kidney or vascular disease.

Hemoptysis that comes on in maladies of the circulatory apparatus are the next most frequent in order. They may be met at the onset of mitral insufficiency. PETER, indeed, gives it as an inital symptom in such troubles. I have more often seen simple epistaxis in these cases, while I consider hemoptysis to to be rare in other heart cases at first. These hemorrhages are quite different from those seen later in other cardiac diseases as regards their pathogenesis. It was formerly admitted that they were caused by the increase of pressure in the pulmonary vessels by the action of an hypertrophied heart. But it is not enough to have a stasis, we must have an alteration of the vessels themselves. They, in fact, have lost their elasticity and contractility and end by having partial dilatations. The hemorrhages that then take place into the cellular tissue, cause a lesion of a hard brown appearance and the tissue takes on a yellow-red color, becomes heavy and friable as seen in autopsies.

It is much more common to find that hemoptysis seen in heart cases, is caused by infarcts or embolisms. As a rule the embolus causes a hemorrhagic infarct arrising from a thrombosis of the right heart when it no longer can effect compensation. In endocarditis of an infectious nature, the pulmonary embolus causes a metastatic abscess, or else pulmonary gangrene. In ordinary cases the infarct will pass on only to be found at the autopsy. These patients will have a cough of a painful nature that is of considerable diagnostic value when they have not had bronchitis; with this is a pain or a stich in the side, and twenty-four or forty-eight hours afterward hemoptysis sets in which may last for six to eight days. The diagnosis of hemorrhage from infarctus may be made then from fainting, dyspnea, expectoration of blood, stitch in side, and physical signs that are found in a person who has had heart disease. It is rarely accompanied by considerable hemorrhage.

Hemoptysis in women must be studied apart. They may be divided into *nervous*, *supplementary* or *complementary*. Pulmonary hemorrhages during the sexual period of a woman's life are rarely independent of a cardiac or pulmonary affection. The relation of these hemorrhages to the menstrual function can be established in two ways: In the first, the menstrual deviation can be produced by pulmonary hemorrhage without any disease of the lungs. These losses of blood from the uterus and the lungs finish by causing the physical signs and nervous troubles of post-hemorrhagic anemia. During the interval of the menses the general health remains good and nothing can be detected in the chest showing tuberculosis. These facts have caused us all to accept this form of hemoptysis as functional in nature. In the second case the blood comes only from the lungs, and none from the uterus, and here this determination of the blood to the lungs may cause tuberculosis at last. We must not forget that both of these cases may exist with phthisis. There are other cases of hemoptysis that come during pregnancy. These are for the most part attached to some heart disease developed before the pregnancy. Finally, there are cases of hemoptysis seen at the menopause, which come on every four weeks. There is also a category of hemoptysis that is seen in very nervous women as has been well studied by DR. LANCEREAUX. These persons are found spitting blood between the menses, which are regular in quantity. We are not, however, justified in making this diagnosis as one of nervous origin until a very careful examination has been made of the chest and sputum. They may, of course, become dangerous if they continue and are very abundant.

CLINICS.

MEDICAL CASES AT MERCY HOSPITAL.

SERVICE OF W. T. DODGE, M. D., BIG RAPIDS, MICHIGAN.
SURGEON TO THE HOSPITAL.

TYPHOID FEVER.

UP to the present time (October 21) twenty-five cases of typhoid fever have been treated in this hospital this fall, a number of them being still under treatment. Of this number only one has died. All of the cases had been sick more than a week before coming here. The majority have been severe cases with temperatures ranging from 102° to 105½°. Very few have had diarrhea and never to excess. The majority have been constipated and have required occasional doses of the mild chloride and castor oil. Many of the cases have had the rose eruption and many were delirious.

Some may raise a question as to the correctness of the diagnosis. I believe that all cases of continued fever, excluding the exanthemata, not yielding to quinine and running a regular course of two weeks or more, whether typical typhoid symptoms are present or not nevertheless possess typhoid lesions. The average duration of these cases after entering the hospital has been three weeks. The treatment has consisted principally of salol and hygienic regulations, strict liquid diet, et cetera. Phenacetine has been administered whenever the temperature exceeded 103° with satisfactory results. In every case a large dose of quinine (thirty grains) was administered soon after admission. If no effect was visible in the course of the fever it was not repeated except in tonic doses.

The fatal case was admitted October 18, with a history of having been ailing a week, but patient did not consider himself very sick, and had not been confined to his bed. Had constipation, flat abdomen, no eruption, slightly fevered tongue, and objected to being kept in bed or being dieted. These requirements were enforced, however, and a dose of oil given, followed by the usual dose of quinine. His temperature at no time exceeded 100°, and a positive diagnosis of typhoid was not made. On the morning of the 20th, two days after admission, he had a sudden onset of pain in the abdomen, suffered a severe chill, went into a state of collapse, and died in twelve hours.

An autopsy revealed the presence of fecal matter and pus in the peritoneal cavity. Examination of the small intestines resulted in the discovery of a perforation in the ileum. I removed a section of the intestine and found the perforation in the center of an inflamed Peyer's patch. Other portions of the intestine furnished me beautiful specimens of infiltrated and ulcerated Peyer's patches. This case was then positively demonstrated to be one of typhoid fever, and until the occurrence of the perforation there was entire absence of any positive clinical symptoms of that disease. I believe it is far safer to regard all cases of continued fevers as typhoid, and to establish hygienic and dietary regulations accordingly. All of our cases come from lumber camps, many of them a long distance from here.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, OCTOBER 9, 1893.

THE PRESIDENT, JOHN FLINTERMANN, M. D., IN THE CHAIR.

PRESIDENT'S ADDRESS.

DR. F. W. MANN, retiring president of the association, delivered the following address:

The custom whereby the retiring officer of a medical society on surrendering his chair to his successor delivers a valedictory address is one that affords excuse for saying much there is no obvious necessity for saying. The orator on these occasions is permitted the privilege of descanting discoursively on subjects of no particular significance. He may gloryfy the achievements of modern medicine and surgery; he may indulge in somewhat hysterical panegyrics upon the discoverer of chloroform or other benefactors of the human race, or he may proclaim his belief in the reality of latter-day progress.

It requires less genius to prepare this kind of address than it does to listen to it. There is, however, a certain significance attaching to last words which cannot be despised, and whether these be uttered from the scaffold or from some worthier, though less conspicuous rostrum, they linger longer in the memory than some others and possess a quality of permanence which makes the opportunity of uttering them one not to be neglected. The heirs of a celebrated preacher issued on his death a small souvenir volume entitled "The last words of the Reverend So-and-So." The book was so successful that it was shortly after followed by another volume entitled "More last words of the Reverend So-and-So." My last words, however, shall be very few and followed by no more.

Former occupants of this chair have alluded to the necessity that exists for this society establishing itself in a permanent domicile—in a building that could be used for the varied purposes of the profession as a body. The necessity for this building is as urgent today as it has been on former anniversaries. It had at one time been my hope that we should have celebrated this anniversary in such a building of our own. Indeed, I think I may say without exaggeration that if it had not been for what is known as "the stringency," if it had not been for the peculiar financial situation of the last six months, we should have been so situated to-night. Through the wide-awake observation of one of the members of the special committee entrusted with this scheme (DR. J. H. CARSTENS), the committee were made familiar with a property which would have suited our purposes admirably. To have obtained this building only needed a little financiering—a matter of increasing the amount of a mortgage by giving additional collateral security; but when the bankers who were holding this mortgage were interviewed, they not only refused to make additional advances, but intimated that the purchaser of the property would probably be called upon to pay an installment on the existing mortgage. As the members of this committee did not pose as financiers, they thought it better to suspend operations until the conditions of the situation should be more within the range of their capacity.

It may be urged that a scheme of this kind is not practicable to a profession already heavily taxed with extraneous expense. Not only would a considerable sum for the purpose of purchase have to be raised, but a fund for income have to be provided. When I mention the fact that a brief canvass among six members of this society promises a support amounting to three thousand dollars, I think it will readily be admitted that the raising of six, seven or even ten thousand dollars might be within range of possibility; especially would this be the case if the amount contributed could carry with it an investment feature, so that for the amount subscribed an interest-bearing bond could be exchanged. It might be urged that the issuing of bonds might lead to the creation of a controlling interest, one or more parties gradually acquiring possession of the bonds, and playing the game of "freeze-out," which commercial ethics allow. I think this could be obviated by simply making the bonds non-transferable, and payable only to the party to whom issued or his legal heirs.

To pay interest on a bonded indebtedness, besides interest on a mortgage, and these in addition to the current expenses of such an establishment, would require a steady income, and this brings us to the question—How is such an income to be raised?

The annual dues of the society do not provide an adequate amount. They seem to be difficult to collect. A man even with the fascinating manners of our present treasurer encounters considerable reluctance on the part of those whose first duty it is as members of this society to pay promptly their small assessment. A larger income would be needed, and I desire to call attention to a plan which has operated admirably in Cincinnati. The medical societies in that city have combined and have a common building. They equip their library with all the newest text-books on medicine and surgery, all the expensive atlases of anatomy, dermatology and obstetrics. They then tax all the medical students of the city one dollar per year for the use of this library. In Cincinnati there are, I believe, from four hundred to five hundred students. In this city there are probably at least three hundred. There is no student who would grudge the small sum of one dollar added to his fees for it would in every case save him the expenditure of a larger sum. If our library could be fully equipped for the purposes of the students, I feel sure the faculties of our medical colleges would fall in with the idea and authorize their treasurers to make these collections.

We already possess something more than the foundation of a good library. The library at present seems to be more in need of readers than books. The excellent work done by our librarian, Dr. **Becelaere**, is something that deserves more particular acknowledgment than a vote of thanks. Donations of books are urgently needed. Medical works five years old are usually of no use to their owners. They are not of much use in a library, but this is the only place where they are likely to be of value. We would urge members to add a clause to their wills bequeathing their libraries to the association. It may be objected that when a doctor dies all he has to leave his widow is an anatomical horse and his library; but his widow would always be just as well off if she had the horse alone.

The amalgamation of the various medical societies is a project already within the range of practical possibilities. We have a committee engaged in advancing this scheme, and it is believed something of benefit to the profession will result from their labors. But the building is felt to be the pivotal point upon which many events turn.

I desire to commend these subjects to the attention of the new executive. The Detroit Medical and Library Association is better fitted to be a center of condensation than a center of crystallization. In the comparatively short period I have been associated with it I have seen its membership double. The pastoral energy it has manifested this year, in gathering thirty-three young doctors into the fold, indicates that it is a live society, free from domination by any spirit of old-fogyism, a society where old and young mutually give and take; where the old members gain new inspiration from the zeal in which the young ones exemplify Terence's maxim "Nosce omnia hæc salus est adoloscentulis."

In conclusion, I desire once more to thank the members for the great honor they conferred in electing me to the presidential chair. I shall look back upon the year in which I presided over the deliberations of this association with feelings of pleasure, and I can give the new occupant of the chair no better greeting than to express the hope that he may derive therefrom a similar measure of enjoyment.

STATED MEETING, OCTOBER 10, 1893.

THE PRESIDENT, JOHN FLINTERMANN, M. D., IN THE CHAIR.

EXHIBITION OF PATIENTS.

Dr. Becelaere presented for the examination of the society the case of a little girl suffering from an eruption of the scalp following the use of some domestic ointment.

Dr. Carrier thought the eruption to be a folliculitis, perhaps a perifolliculitis, or else a simple dermatitis caused by the irritation of the salve; he considered that it might possibly be due to infection from the trichophyton, but considered the history of the case as unfavorable to this. He recommended epilation.

DISCUSSION OF PAPERS.

Dr. Collins read a paper on "Typhoid Fever: Its Cause, Pathology and Treatment." (See page 529.)

Dr. Bonning said that he considered typhoid fever as dangerous as diphtheria and scarlet fever. He believed all internal antiseptics were valuable, although personally he preferred carbolic acid and iodine. The best results are to be obtained by the use of cold baths, especially when given in the **Brandt** system.

Dr. McGraw related a case which he had seen in consultation, where a young man had come down from the north with a previous history of typhoid. The young man found it impossible to stand upright, and shortly afterward developed a fecal fistula in the region of the umbilicus. Death occurred shortly afterward and the autopsy showed that the appendix was normal. There were recent ulcers in the ilium, a general peritonitis and a perforation at the junction of the jejunum and ilium. There had been no pain on pressure over the abdomen and no rise of temperature.

Dr. Carstens considered the use of ice, which had been gathered in places where the water was impure, one of the principal means of transmission of the typhoid bacillus. He thought our city should have a rigid inspection of its water supply.

Dr. Sprague considered that milk was the principal means of disseminating typhoid fever.

Dr. Mulheron, while not doubting the sincerity of the reader of the paper in his diagnosis, thought that he, himself, might have inclined to the diagnosis in some cases of simple, continued fever. He made it his practice to watch the kidneys very closely. He considered coffee a most excellent stimulant.

Dr Knill referred to the health statistics of the different lake ports, and showed that the mortality from typhoid was less in this city than at any other lake port. He believed it had never been proven that the milk as it came from the cow contained typhoid bacilli, but was subsequently infected by impure water.

Dr. Alonzo Bryan thought that typhoid-fever diarrhea should not be checked unless its effect was prostrating. He related a case of diphtheria immediately followed by typhoid fever.

Dr. Tibbals inclined to the opinion that there might be several germs giving rise to the various forms of fevers which were now all classed as typhoid.

Dr. Frothingham spoke very emphatically about the water supply and also of the dangers which we are exposed to when traveling, owing to the impure ice as well as impure water on the cars.

Dr. Flintermann discussed the recent epidemic at Ironwood and the water supply of some German cities. He considered that we should always be on the lookout for typhoid cases.

Dr. Collins, in closing the discussion, briefly ran over the different points upon which he had established his diagnosis, giving especial importance to the temperature curve.

Adjourned. P. M. Hickey, M. D., Secretary.

CORRESPONDENCE.

FORCEPS VERSUS OTHER REMEDIES IN REMOVING FOREIGN BODIES FROM THE ESOPHAGUS.

To the Editor of The Physician and Surgeon:—In *Harper Hospital Bulletin* for October, 1893, Dr. P. M. Hickey reports a fatal case of esophagitis supposed to be caused by the efforts of another surgeon to remove a piece of bone lodged in a woman's esophagus when eating her dinner, which clearly shows the danger of the blind use of the forceps when guided by neither the eye nor the finger in trying to grasp a bone surrounded by tumefied mucous membrane.

On reading the report the enquiry naturally suggests itself: Would it not have been better to have used an emetic which would have brought up the dinner and with it the bone without causing any trauma? About three years ago a patient in a similar condition came into my office. Not being able to swallow anything, I injected into her arm one-tenth of a grain of apomorphia; in a few minutes the dinner and the bone were ejected. In this case the bone was out of sight but not beyond feeling.

About four weeks ago I was called to see an old lady in whose esophagus a large knuckle of beef had lodged when eating her dinner. I could feel the tumor, and on satisfying myself that there was no large bone connected with the meat, I introduced a probang which forced the obstruction into the stomach. If there had been a large bone I would have given one-fifteenth of a grain of apomorphia hypodermically.

The sad result in Dr. Hickey's case should teach a lesson of prudence and reliance on simple remedies when in a dilemma. J. Byron Newman, M. D.

Detroit, 315 Jefferson Avenue.

"MORPHINE POISONING."

Editor of The Physician and Surgeon:—I have read report of cases of morphine poisoning by Drs. Flintermann and Hitchcock, and thought that perhaps it might be of interest to some of the profession to know my experience with the faradic current. As a last resort I have used electricity in five cases of narcotic poisoning, placing the negative pole over different portions of the body where important nerves are near the surface, and only for an instant. I employ a very strong current, which proves a means of *torture* (the antidote for opium), and also stimulates the nervous system. One case was saved after eight hours of persevering effort on the part of two good physicians. Yours respectfully,

J. S. HERRIES, M. D.

WATERLOO, IOWA, December 4, 1893.

EDITORIAL ARTICLES.

TRANSCENDENTAL PHYSIOLOGY.

THE transcendental physiologists seem to have gained a convert in the person of the editor of *The Medical News*, who, in discussing the question—"What is Life?" suggests the necessity of explaining the phenomena of vital processes by extrinsic agencies. After alluding with theological intensity to the "impertinence" of those who consider science as pertaining only to things physical, the writer with some confusion of metaphor, goes on to say that "there have been such flooding breakers of new knowledge pertaining to the material world that the noses and mouths of all but the best swimmers have been filled with over-much undrinkable sea-water. Now, however, we are beginning to wade on the solid earth of systematized knowledge, and are coughing out the bitterness of our emphatic protest." It will be interesting to observe what better notion we acquire of the nature of life, from those who are "wading on the solid earth" instead of floundering amidst "undrinkable sea-water."

"It has been the fashion of physiologists," says the writer,—"they who deal especially with life—to deny its existence." Is this exactly true? Physiologists differ as to the nature of life, but scarcely deny its existence. Physiologists may have affirmed, that as far as investigation goes, the simultaneous and successive changes, which are the physical counterpart of life, constitute the ultimate basis of what is manifested as existence; they may even affirm nothing further to be knowable, but this is not to deny the existence of life any more than one would deny the existence of an eolian tone by demonstrating the vibratory changes of which it is the product.

What, then, is life, to the understanding of those "wading on the solid ground of knowledge?" Apparently the agency underlying and causing organic phenomena, and which manifests itself as life, is none other than our antiquated but respected friend, "the vital force." It is undoubtedly true, that nothing is known of the absolute nature of secretion, motion, assimilation or any of the qualities of organic existence. The nature of the difference between the living and the non-living, is unknown and probably always will be. It may be a consolation to some to know that this difference is due to the vital force, just as it is a consolation to others to know that all the phenomena of organic life are due to expansion and contraction of the akasa or astral light,—but to suppose that such an explanation will be accepted as a scientific dictum is to assume for the Western mind an attitude of acquiescence that could hardly be equalled in the mental apparatus of the grand Llama of Thibet.

WHAT SHALL WE DO WITH THE CRANKS?

Our excellent contemporary, *The Medical Fortnigthly*, furnishes a symposium, in which a number of gentlemen eminent in psychiatry and nervous diseases, discuss the question—"What shall we do with the Cranks?" The question is important in its medical and sociological bearings! The recent untimely ending of Mr. Carter Harrison's career, at the hands of one of these individuals, emphasizes the danger to which from their existence all communities are more or less subject.

The great difficulty which presents iself in the solution of the problem is one of classification. The crank, although occupying the borderland of insanity, has not hitherto been regarded a lunatic, and it may be as Dr. Bauduy says—"The question of responsibility and irresponsibility will always be an unsolved problem." The crank is not necessarily a subject of *paranoia persecutoria*, but is a defective individual who cannot always be deprived of liberty of action and can never be deprived of liberty of thought. The jail and penitentiary are fit places for the vicious, but not for mental degenerates. Cranks with homicidal or dangerous tendencies, should certainly be confined, but where? It may be as Dr. F. R. Fry suggests that, "until we become civilized enough to confine or properly take care of them, we ought to kill a great many more than we do." What, however, are we to do with erratics and eccentrics who are simply troublesome? Someone suggests "build *crankeries*," and Dr. C. F. Hughes seems to think these people should be corralled and treated in some half-way house midway between a penal reformatory and an asylum. Could we really reconcile ourselves to do this? What a stupid place this world would be if the evenly-poised intellects had a monopoly of it! Think what a loss it would be if all the delightful cranks who dabble in science, literature, and sociology just enough to upset all preconceived and established theories, were banished to a half-way house. We should have to sojourn at the "crankery" to encounter that wholesome opposition which calls forth that energy of thought so essential to the consolidation of our beliefs.

No doubt many cranks have their egotism fostered into insanity by the ridiculous attention bestowed upon them by the press and by those who should judge of their exploits with more discrimination. There is some latent wisdom in the suggestion of Dr. A. B. Shaw who says that "if cranks were compelled to wear something indicating that the wearer, by reason of peculiar talents, was a century or so in advance of the great bulk of mankind, I believe ninety per cent. of the cranks would, from lonesomeness, cease to be cranks for man is a gregarious animal." There is, however, just a chance that the wearers of this proposed decoration might really consider themselves to carry the insignia of a veritable *legion d'honneur* for once misapplied its opprobrium would be lost.

EDITORIAL BREVITIES.

MYXOSPORIDIAN INFECTION.

Dr. J. B. Whinery, of Grand Rapids, contributes an interesting article to the *New York Medical Journal* on a myxosporidian infection in the common toad. The article is based upon original work. The subject is a very important one in the light of modern pathological inference. The sporozoa seem to be likely to occupy an important position in human pathology, and a growing tendency is manifest to consider these unicellular organisms to be ætiologically related to carcinoma. Parasites of this nature exist chiefly in the protoplasm of the epithelial cell, and it is supposed the lesions they cause are of an irritative form.

REFORM IN EDUCATION.

In a suggestive lecture delivered by **Dr. W. T. Porter**, in Saint Louis, some new ideas were enunciated. Among these was one which advocated the grading of pupils on a physical rather than a mental basis. Measurements and weights indicating the degree of physical vigor were to be the basis of classification, and the mental capacity was to be widened only in a relative ratio to the physical capability. While this plan might tend to depress intellectual precosity, it might have a generally elevating tendency upon the race. The suggestion deserves to be pondered over by those interested in educational matters.

MEDICAL NEWS.

Leprosy is on the decline in India.

Small-pox is reported from six states.

Alcohol for scientific purposes is duty free.

A home for epileptics is to be built at Brooklyn.

The Manitoba Medical College has upward of two hundred students.

The Sisters of Mercy have established a hospital at Des Moines, Iowa.

The *Dominion Medical Monthly* is a new journal published in Toronto.

Washington City has its fifth medical school—the National Homeopathic Medical College.

The negro physicians have an organ in the *Medical and Surgical Observer* emanating from Tennessee.

The Boston City Hospital received a medal at the World's Fair for the excellence of its hospital service.

First aid to the injured is the humane purpose contemplated by a society recently organized in Chicago.

Change of Address.—Dr. J. H. Carstens to 620 Woodward avenue; Dr. W. G. Henry to 4 Adams avenue, west.

The forty-fifth annual meeting of the American Medical Association will be held in San Francisco, June 5, 1894.

Dr. William H. Broadbent has been appointed physician to Premier Gladstone *vice* Sir Andrew Clark, deceased.

The Omaha Medical College has a new building which cost twenty thousand dollars. It was dedicated November 21.

The next meeting of the Pennsylvania State Medical Society will be held at Gettysburg, May 15, 16, 17 and 18, 1894.

DARTMOUTH MEDICAL COLLEGE graduated a class of twenty-eight at the commencement exercises held on November 21.

A CREMATORY recently built in a New England town was opened by the oven being used for the purposes of a clam-bake.

THE hospitals of Paris are to be supplied with special stóves for burning bandages, dressings, and sweepings of wards.

THE widow of Dr. E. Hunt, of Hartford, Connecticut, has bequeathed twenty-five thousand dollars to the Yale Medical School.

THE Governor of Missouri has appointed Dr. F. J. Lutz, of Saint Louis, Surgeon General of the National Guard of that State.

THE sanitary inspectors who served on the Canadian and Mexican frontiers during the past summer were discontinued November 1.

DR. J. H. KELLOGG, of Battle Creek, Michigan, has been made an honorary member of the Société Francaise D'Hygiène, of Paris.

AN excursion to Bermuda is being arranged for by Dr. B. Mattison, of Brooklyn. It is planned for Wednesday, January 3, 1894, and will be a ten-days' trip.

THREE months in the penitentiary is the sentence imposed upon Dr. Walter May Rew, of New York, whose bogus medical college was exposed in July last.

DR. ABRAHAM JACOBI, of New York, has received an offer flattering to American scholarship in being asked to accept the chair of pedology in the University of Berlin.

THE death-rate in New York City for the week ending November 26, was seventeen and forty-six-hundredths per one thousand—lowest ever recorded in the metropolis.

PROFSSOR POTAIN has been elected to the Académie des Sciences, in succession to Professor Charcot. A lecture from this famous clinician will appear in our January issue.

ONE hundred and twenty-four new definite chemical products have been introduced as remedies during the last few years. Three-fifths are reported worthless or useless.

BROOKLYN is likely to have a non-sectarian home for epileptic patients. A lot has already been secured, and a building fund of ten thousand dollars is now the great desideratum.

DR. BRISSAUD has been nominated to fill Professor Charcot's place at the Salpêtrière for one year, at the end of which time the permanency of his appointment will be considered.

DR. C. P. PARKILL, senior member of the firm of Parkill & Son, druggists and chemists, of Owosso, and a resident of that place since 1840, died recently at his home after a brief illness.

THE Staten Island Hospital is to be the name of an institution which is being organized by the ladies of Staten Island, and which it is contemplated to open about the middle of January. Nine physicians who practice on the island have signified their consent to serve on the staff.

Denver has several hundred cases of malaria. It is of the dumb-ague variety, the chills and fever simulating the Illinois type. This is the first instance of malaria in the history of that city.

Moscow has a new physiological institute erected at a cost of sixty thousand dollars. The furnishings involve an expenditure of five thousand dollars. It surpasses any institution of its kind in Europe.

The *New York Herald* publishes detailed accounts of twenty-six deaths in England occurring from this season's foot-ball games. Six fatal accidents have occurred in this country during the present year.

Detroit College of Medicine Students' Banquet.—A highly successful students' banquet was held at the Hotel Cadillac, November 22, the faculty and students engaging in mutual courtesies over the dinner table.

Dr. Mary A. Suganuma, an American woman who is married to a Japanese gentleman, has been licensed by the government to practice medicine in Nagasaki. She is the first woman physician ever licensed for that purpose in Japan.

The steamship Lenark, from Java, via Port Saïd, Algiers, and Gibraltar, arrived at Philadelphia November 3, with eight cases of well marked beri-beri, and thirty-one suspects. Fifty Hindoos and several Arabs composed the crew.

The Oriental Life Assurance Company, which possesses a monopoly of the native business in India, charges no extra premium to users of opium, and during the last twenty years no risk has been paid for death attributable to opium.

Dr. Joseph M. Mathews, of Louisville, will launch a medical journal early in the new year. It will be known as *Mathews' Medical Quarterly*, and will treat of the rectum, gastro-intestinal diseases, and rectal and gastro-intestinal surgery.

A cablegram announces that raw oysters are responsible for two deaths which recently occurred in Berlin. Before credence can be reposed in this information it will be necessary to reconcile the etiology with the effect of brine upon this crustacean.

Dr. Charles E. Rice, of Flint, was found dead in his bed on the morning of December 14. The deceased was one of the early pioneers, and practiced medicine when Genesee county was a wilderness and had but few physicians. He was eighty-six years old.

The Alumni Association of the College of Physicians and Surgeons, of New York, will award a prize of five hundred dollars in June, 1894. The competitor may select any medical subject desired, but must be an alumnus of the college. Address, for particulars, T. M. Cheesman, M. D., Secretary Alumni Association, 46 East Twentyty-ninth street, New York.

Dr. William Bullock recently died at the Eastern Michigan insane asylum. The doctor practiced medicine successfully in Flint until about twenty-five years ago, when he was adjudged insane and sent to the asylum. A few years since he was at home for a short time, but realizing his malady, returned of his own accord to live the balance of his life under restraint. He was a native of Michigan, a graduate of the University, and seventy years of age.

THE College Club, of Boston, recently tendered a reception to Dr. Oliver Wendell Holmes. From a laurel-decorated chair stationed beneath a bower of palms, he clasped the hands of over five hundred people, and afterward entertained them with recitations.

WOMEN physicians may now practice in Turkey in connection with their missionary work, Dr. Mary P. Eddy, the daughter of a minister, being the first woman to whom this privilege has been granted. The Presbyterian Board of Foreign Missions succeeded in breaking the barrier against the gentler sex.

THE second sanitary convention of California, will be held at San Jose, Monday, April 16, 1894, beginning the day preceding the meeting of the California Medical Society. A resolution will be introduced declaring consumption a communicable disease, and requiring notice of the prevalence of the disease to the health officer.

DR. LUTHER S. HARVEY, food inspector of Detroit, recently contracted ptomaine poisoning by eating some suspected cheese. The symptoms were dangerous, and for a period the doctor's life was in the balance. Happily he recovered, and now considers the test-tube more valuable for certain scientific purposes than his own stomach.

A NEW Maternity Hospital was recently dedicated in New York City by His Grace, Archbishop Corrigan. The building, which was erected at a cost of one hundred and ten thousand dollars, is seventy-five feet wide, one hundred and thirty-eight feet long, and five stories high, and is intended to be the east wing of a structure that will be completed in a few years. It contains one hundred and fifty beds, and is located at 523–537 East Eighty-sixth street.

J. F. BARLRICK, a traveling physician, was arrested at Bay City recently and taken to Lansing to answer to a charge of attempting to practice his profession in that city without first filing the required affidavit with the county clerk, and procuring a license. He was fined twenty-five dollars, and costs amounting to twenty dollars, by Justice Lesher, but will take an appeal to the circuit court. He is one of the English and German combination of physicians and surgeons.

DR JOHN M. KEATING, of Philadelphia, died of pneumonia on November 18, at Colorado Springs, where he had been sojourning the past four years in the hope of regaining lost health. He had achieved eminence in his specialty—diseases of women and children—and was a prominent character in society affairs. He was a graduate of the University of Pennsylvania, and the author of several medical works, notably a "Dictionary of Medicine," and an "Encyclopedia of Diseases of Children."

SINCE 1879 the degree of Doctor of Dental Medicine of Harvard University, and the degree of Doctor of Dental Surgery of the University of Michigan have received recognition in Great Britain, and the holder has been allowed to pursue his profession by simply acceding to the formality of registration. The British General Medical Council have recently resolved to suspend this privilege on the ground that injustice is done other American schools with equal educational advantages, and likewise to British institutions, by placing them on a par with the two American schools, which require only three years' study, and over which the Council have no power of visitation and inspection.

DR. HERMAN M. BIGGS, chief inspector of the division of pathology and bacteriology of the New York Health Department, has declared consumption a contagious disease, and recommended to the Board of Health that action be taken to restrict transmission by germ contact. Tuberculosis caused six thousand deaths in New York last year.

A NEW kind of bread has recently been introduced in Detroit. It is made from corn flour and wheat flour. By adding forty per cent. of wheat flour to sixty per cent. of corn flour the result of the baking is a sort of bread that looks and tastes very much like rye bread. It is said to be good, wholesome, and nutritious, and well adapted to the present hard times.

DR. A. JACOBI, of New York, chairman of the American National Committee of the International Medical Congress, which was postponed from September 24 on account of cholera prevailing in Italy, has been notified by the Secretary-General that the Congress will be held at Rome from March 29 to April 5, 1894. Instructions and documents relating to the journey, et cetera are promised for the near future.

THE Medical Society of the University of Maryland was recently organized at the University of Maryland, Baltimore, with the following officers: President, Dr. J. J. Chisholm; vice-president, Dr. C. W. Mitchell; secretary, Dr. W. B. Canfield; executive committee, Drs. J. E. Michael, W. B. Platt and J. N. Hundley. The membership of the society will comprise the faculty, adjunct faculty, teaching and hospital staffs, and graduates of the University. Meetings will be held on the first Tuesday of each month.

DR. CHARLES WARRINGTON EARLE, of Chicago, died November 19, of meningitis. The Doctor was born at Westford, Vermont, April 2, 1845, served in the Union army during the war, and received the degree of Doctor of Medicine from the Chicago Medical College in 1870. He was one of the founders of the Chicago College of Physicians and Surgeons, and at the time of his death held the positions of president of the Chicago Medical Society and Dean of the Woman's Medical College. He was once president of the Illinois State Medical Society.

THE MEDICAL SCHOOLS OF MICHIGAN.—There are seven hundred and fifty-nine medical students in Michigan. The University of Michigan has three hundred and sixty students, divided as follows: Freshmen, 119; sophomores, 92; juniors, 85; seniors, 64. The Detroit College of Medicine has two hundred and seventy-seven students, divided as follows: Freshmen, 100; juniors, 80; seniors, 97. The Michigan College of Medicine and Surgery has one hundred and twenty-two students, divided as follows: Freshmen, 64; juniors, 34; seniors, 24.

THE Czar has recently been adjusting medical fees in Russia. The population is divided into three classes according to vocation, and payment of fees is exacted under severe penalties. The first class are asked to pay two dollars and seventy-five cents for each consultation; the second class one dollar and sixty-five cents; while the third class, which, by the way, comprises the masses, is limited to nineteen cents. If the fee were proportioned to incomes, it is said the first class would pay twenty-seven dollars; the second, sixteen dollars; while the fee for the third class would remain at nineteen cents.

IN the suit for twenty-five thousand dollars damages brought against Dr. Archibald B. Earl, of Kansas City, by Miss Caroline T. Doss, the jury rendered a verdict for the defendant. In 1892 this lady, aged sixty-eight years, broke her arm and called the doctor to reduce the fracture. The case finally drifted to the court, where Miss Doss set up the stereotyped claim of malpractice, alleging that because of improper treatment the arm remained crooked to the degree of maiming her for life. Dr. Earl set up the defense that he had retired from practice, being seventy-five years of age, and rendered service purely as an accommodation, maintaining, however, that the surgery was good, and that the deformity was due to carelessness on the part of the plaintiff in not properly protecting the arm.

ON the recent occasion of his seventieth birthday Professor Virchow, of Berlin, received a medal which weighed nearly six pounds, and represented a value of about three hundred and fifty dollars in pure gold. The obverse contains a bust of the Professor encircled by an appropriate inscription, and the reverse shows an allegorical group representing the genius of Investigation, winged, and carrying a flaming torch in the left hand, while with the right he lifts the veil of Isis. At the foot of the Isis column is a table with the representation of the Berlin Pathological Institute. In the background Science, on her lap an open volume, is seen contemplating a skull, while around her are other pathological emblems. An inscription marks this side also. The Professor's wife received a silver, and each of his children a bronze, replica of the medal.

DR. JAMES CAMPBELL, whose death occurred recently at his residence in Detroit, was a graduate of the Trinity Medical College, of Toronto, Ontario. The Detroit Medical and Library Association, of which the doctor was a member, unanimously adopted the following resolutions at its meeting held November 17: *Whereas*, There has been suddenly removed from our midst Dr. James Campbell; therefore be it *Resolved*, That in the death of Dr. James Campbell the society has lost a valuable member and the medical profession an honest and energetic co-laborer, stricken down in the prime of his usefulness; and that the community and the educational interests are deprived of the wise counsel of an upright citizen. *Resolved*, That a copy of these resolutions be handed to the public press and to the bereaved family. J. H. Carstens, M. D., C. G. Jennings, M. D., H. W. Longyear, M. D.

ANOTHER damage suit has been brought to a happy termination at Branchport, New York. In April, 1892, Dr. Marcus E. Babcock, of that village, was sued by John Bell, of the same place, for alleged malpractice in treating a fracture and partial dislocation of the second joint of the right little finger. The doctor attended the injury seven weeks. About six months after this accident (which occurred in June, 1891) Bell observed that the third or knuckle-joint of the same finger was so badly dislocated that it would not remain in place, produced great suffering, and interferred with the prosecution of his trade. He asked the court for one thousand dollars damages, claiming that this joint was dislocated when the second was, but that the doctor failed to make the discovery. The case was taken from the calendar and given to a referee, who, notwithstanding stubborn contest on both sides, exonerated the doctor, dismissed the complaint, and assessed the costs to Bell.

THE Irish victims of the cholera plague of 1847 who died in hospital at Kingston, Ontario, will be commemorated by a statue to be erected on a mound in the hospital grounds, under which the remains of many of the deceased are interred. Over one thousand Irish immigrants succumbed to the dire disease at Kingston, and Archbishop Cleary, of that city, proposes that their memory be honored by the erection of a life-size picture of an angel chiseled from Carrara marble. It will be made from a solid block three tons in weight, and will cost one thousand two hundred dollars.

THE Woman's Hospital and Foundling's Home, of Detroit, is in distressing circumstances. The board of managers announce that the institution is three thousand four hundred dollars behind this year, the current expenses of the year being about ten thousand five hundred dollars, and receipts so far from donation, entertainments and board of those who are able to pay, a little over seven thousand dollars. There are at present sixty-nine babies and fifty-eight mothers at the home. The ladies of the institution some time ago made a very urgent appeal for help, but owing to the stringency of the times, no doubt, the response was much below what they needed. The board again calls upon a generous public for funds to enable them to conduct the affairs of the hospital without incurring further obligation, and solicits personal observation of the worthy charity that is being performed within its walls.

DR. JENKINS, health officer of the port of New York, recently presented his annual report. A duty of this official for the year involved the inspection of five thousand three hundred and eighty-three vessels from foreign ports, and one thousand nine hundred and fifty-two from domestic ports. The former paid twenty-four thousand twenty-two dollars and fifty cents for this service, and the latter three thousand one hundred and sixty dollars. The revenue from fumigation amounted to eight thousand five hundred and forty-five dollars. The revenue from the inspection of three hundred and eighty-eight thousand one hundred and eighty-six immigrants, night-boarding, transportation, and vaccination was sufficient to swell the total receipts to forty-eight thousand four hundred and sixty-six dollars and forty-seven cents, or one thousand seven hundred dollars more than was required to sustain the service.

THE venerable Colonel N. B. Eldridge, who died at Adrian on Monday, November 25, was formerly a practicing physician. He was born in Auburn, New York, March 28, 1813, received a common school education and graduated from the Fairfield Medical College. In 1837 he came to Michigan, and located in Lapeer county, where he practiced the healing art for fifteen years in and about Lapeer. He was secretary of the senate in 1845, and in 1848 was elected to the legislature. In 1852 he was elected probate judge of Lapeer county, which office he held four years. In 1856 he was admitted to the bar. In 1861 he was the first volunteer from Lapeer. Later Governor Blair appointed him Colonel of the Eleventh Infantry, and at Stone River his horse was shot from under him. In 1863 he resigned his commission. In 1864 he located at Adrian and entered actively into the practice of law. In 1870 he was elected mayor. In 1872 he was elected sheriff of Lenawee county. In 1884 he led the Democratic "forlorn hope" and was elected to congress, and was reëlected in 1886. His was indeed a checkered career.

Dr. Tourette, a well-known pupil of the late Dr. Charcot, was shot while seated in his consulting room on the evening of December 6. The doctor was seated at his desk, reading a book, when the door of his consulting room was opened and a pretty young woman entered and rapidly approached the doctor. The latter, upon hearing the rustle of the woman's dress and the sound of her footsteps, turned his head and must have sprung to his feet and attempted to escape from the room. The woman fired three shots at him with a revolver before he could make his exit from the room, one of the shots taking effect behind Dr. Tourette's right ear. When arrested she at first refused to give any account of herself, but later on said her name was Camper, and excitedly declared that she was justified in shooting Dr. Tourette, as he placed her under his hypnotic influence and that it was impossible for her to regain possession of her own will unless she killed him. Dr. Tourette is not dangerously wounded, and it is expected that he will be able to show the police theory, that the woman is insane, to be correct.

Secretary H. B. Baker, of the State Board of Health, recently addressed the State Board of Agriculture upon his recommendation that a chair of hygiene be established at the State Agricultural College. The doctor contends that, as many students from the Agricultural College are engaged in instructing the young during the vacations in district schools, where hygiene is supposed to be taught, they should be instructed somewhat in the science themselves. The doctor called attention to the fact that many graduates of the college are in the state legislature forming laws for the benefit of the people, and said that it is certainly for the general good of the people that the leaders of thought and action shall be well grounded in that sort of knowledge which is of the most worth, according to Herbert Spencer, who said "that knowledge is of the greatest value which tends directly to preserve life," The Board of Agriculture took the doctor's suggestion under consideration, and something may eventually come of it. It is understood that Dr. Baker recommended Professor F. W. Bremer, late of the hygiene station at the World's Fair, for the position.

Dr. A. Lagorio, director of the Chicago Pasteur Institute, has rendered a report of the results of the preventive inoculations against hydrophobia attained at this institute since its inauguration, July 2, 1890. To date three hundred and two persons have been treated, classified as follows: One hundred and four bitten by animals recognized and ascertained to be rabid by the experimental proof made in the laboratory; or by the death of other persons or animals bitten by the same animal. One hundred and twenty-six bitten by animals recognized to be rabid by the symptoms of the disease shown during life. Seventy-two bitten by animals strongly suspected to be rabid. Two hundred and eighty-two persons were bitten by dogs, seven by horses, seven by cats, three by skunks, two by wolves, one by a mule. The persons treated came from the following states: One hundred and eighty-five from Illinois, thirty-two from Iowa, twenty-three from Indiana, twenty-one from Kansas, nine from Ohio, five from Missouri, five from Arizona, four from Minnesota, four from Michigan, four from Louisiana, three from Tennessee, three from Kentucky, two from Texas, one from Wisconsin, one from South Dakota. One death was reported among the patients treated, thus giving a mortality of only thirty-three per cent.

THE American Neurological Society offers a prize of two hundred dollars for the best essay on any subject within the domain of neurological science. The competitor must be a resident of North or South America, and the essay—which shall be type-written in either the English or French languages, and with the pages securely fastened—must be sent to the secretary of the association on or before the first day of May, 1894. Address G. M. Hammond, M. D., secretary, 58 West Forty-fifth street, New York City, accompanying the essay by a sealed envelope containing the name and address of the author, and bearing on the outside the duplicate of a motto which shall be inscribed upon the essay.

THE HOLMAN TELE-MICROSCOPE.—Professor D. S. Holman, a member of the Academy of Natural Sciences, has invented an instrument which he calls the Holman tele-microscope. It brings the separation between the shortest range telescope about four feet, and the longest range microscope, about five inches. The instrument magnifies an object one hundred times, the power running from two to fifty or more diameters. As a medium of teaching science by object lessons it is believed it will prove greatly superior to the microscope, for that instrument can be used by only one person. The tele-microscope, projecting all objects upon a screen, exhibits the same to any number of people. It is as a universal projector that Professor Holman uses his instrument in his lectures, giving illustrations almost impossible to give with any other instrument. For instance, with the chromotrope, showing the vortex ring motion, the knotted spiral or ideal vortex atom, light and heat waves; the radiometer, showing the power of heat waves; the Newton disc, illustrating the composite nature of white light; zoötropes, or wheels of life, illustrating persistence of vision, and the phoneidoscope, containing a soap film mirror, which responds to musical tones in geometrical figures of shifting rainbow colors.

THE commissioners appointed to select a location for the Home for the Feeble Minded have decided upon Lapeer. This city gives one hundred and sixty acres of land, upon which there is a fine grove of fifteen acres, and an option on five hundred and sixty-two acres until 1899, at a price not to exceed fifty dollars an acre. It furthermore agrees to put in water mains and supply the home with water for five years free of charge. The site decided upon is about one mile from the heart of the city, on the south side of the road west known as the Flint road, placing the institution between that main traveled road and the Chicago and Grand Trunk Railroad, from which a side track will be extended for the use of the institution. Lapeer's qualifications for the location of the school are excellent. The supply of good, healthful water is practically unlimited, coming from six artesian wells six inches in diameter, two hundred and seventy-five to two hundred and ninety-five feet deep, piped all the way, and connected directly with pumps. They have been in use four years, and the supply is constant. Four of the wells supply all the water the city requires, and the full force of the pumps cannot exhaust the six. The water rises fourteen feet above the surface. All these wells are on half an acre of ground, and more can be furnished as fast as any demand arises for them. The country thereabouts cannot be excelled in the state for agricultural purposes. Railroad facilities are first-class. The Grand Trunk and Michigan Central will bring the home in communication with all parts of the State.

Senator Platt, of Connecticut, has introduced a bill providing that the United States shall establish a bureau of public health, which shall be a branch of the treasury department. The country is to be divided into nine sanitary districts under the bill. Michigan is placed in the northern sanitary district, which also embraces Ohio, Indiana, Illinois and Wisconsin. The bureau is to consist of a commission of fifteen, of whom eleven shall be appointed by the president, by and with the advice and consent of the senate, as follows: One medical commissioner from each of the sanitary districts of the United States, and two commissioners-at-large. The compensation of the appointed commissioners when actually engaged in the performance of their duties, shall be ten dollars per diem and reasonable expenses. The other four members of the commission shall be the surgeon-general of the army, the surgeon-general of the navy, the supervising surgeon-general of the marine hospital service, and an officer learned in the law, detailed by the attorney-general from the department of justice. These four members shall receive no compensation. The duties of the commission are elaborately set forth in the bill.

The coronorial system which maintains in New York has recently been the subject of much animated discussion by the New York Academy of Medicine. They are opposed to the antiquated enactment that permits any clever politician becoming a candidate for this important office, and at a late meeting unanimously adopted the following resolution in favor of transferring the duties of this official to the medical profession: *Resolved*, That a medical man of mature years, established character, broad mind and sound and extensive information in anatomy, pathology, toxicology and all the other branches of forensic medicine must be the responsible occupant of an office in whose keeping are the most sacred interests of the individual and of the community, and to him should be delegated the initiative and power to elaborate the investigations of an actual or alleged criminal act, his conclusions being reported to the office of the District Attorney; and be it *Resolved*, That the New York Academy of Medicine earnestly calls the attention of the approaching Constitutional Convention to the admirable system of medical examiners which the State of Massachusetts has substituted for the coroner's system, and the Academy urges the enactment of similar laws in this state. The Massachusetts service has been in vogue ten years, and has the advantage of being less expensive and more efficient.

The Samuel D. Gross Prize.—The quinquennial prize of one thousand dollars under the will of the late Samuel D. Gross, M. D., will be awarded January 1, 1895. The conditions annexed by the testator are that the prize "Shall be awarded every five years to the writer of the best original essay, not exceeding one hundred and fifty printed pages, octavo, in length, illustrative of some subject in Surgical Pathology or Surgical Practice, founded upon original investigation, the candidates for the prize to be American citizens." It is expressly stipulated that the successful competitor, who receives the prize, shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D. Gross Library of the Philadelphia Academy of Surgery. The essays, which must be written by a single author in the English language, should be sent to Dr. J. Ewing Mears, 1429 Walnut street, Philadelphia, before January 1, 1895. Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay. The committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year. The committee reserves the right to make no award if thè essays submitted are not considered worthy of the prize.

RECENT PUBLICATIONS.

REVIEWS.

SYSTEM OF DISEASES OF THE EAR, NOSE AND THROAT.*

THE system of diseases of the ear, nose and throat, now being issued by Messrs. Lippincott, under the editorship of Dr. Burnett, promises to be a work of permanent scientific value. The volume now issued comprises a consideration of diseases of the ear and nose. The contributions are by eminent American, British, Canadian and Spanish authors. The subjects treated of are traversed in a complete and scientific manner. The book is much more than a collection of monographs. It is a manual in which each separate subject has been treated of by some one specially competent to deal with it. The scope and purpose of the system cannot be too highly commended. It is to be hoped that such careful and praiseworthy work will be appreciated, and that many will be induced to add the system to their libraries. A word should be said in praise of the admirable manner in which the publication has been conducted. The illustrations are as fine as any which have ever been issued.

*Edited by Charles H. Burnett, A. M., M. D., Emeritus Professor in the Philadelphia Polyclinic, et cetera. Complete in two imperial octavo volumes. Price per volume: Cloth, $6.00; full sheep, $7.00; half Russia, $7.50. J. B. Lippincott Company, Philadelphia.

LEONARD'S PHYSICIAN'S POCKET DAY-BOOK.*

AMONG the popular day-books that find their way into the book-market at the present time "Leonard's Pocket Day-Book" will appeal to many old friends who have found the book to answer their purposes during the sixteen years of its publication.

*Bound in Red Morocco, with Flap, Pocket and Pencil Loop. Price, postpaid, $1.00. Published annually by the Illustrated Medical Journal Company, Detroit, Michigan.

ESSENTIALS OF MINOR SURGERY.*

THE excellent quiz-compend of Dr. Martin has passed into a second edition. It has been revised and an entirely new set of bandaging cuts inserted. The value to the student has been enhanced, and it will doubtless maintain its popularity as a quiz-compend among students.

*By Edward Martin, A. M., M. D. Second edition. Saunders' Question Compends, Volume XII. W. B. Saunders, Philadelphia.

THE PRINCIPLES AND PRACTICE OF SURGERY.*

"ASHHURST'S Surgery" is an American classic, and will probably for many years to come enjoy the prestige and distinction its reputation in the past has secured for it.

The work has now been revised for a sixth edition, and no effort has been spared to incorporate in it all the essentials of surgical advance. The general arrangement of the volume is the same as in previous editions. It is amply illustrated and new material to the extent of about twenty pages has been added. Readers near home will find a new feature of interest in the lucid contribution from the pen of Professor Nancrede on "Surgical Pathology." This chapter deals with the bacteria of surgical interest and is illustrated by colored plates.

The volume is a handsome one, and as a manual will strongly appeal to surgical teachers and students.

*By John Ashhurst, jr., M. D., Barton Professor of Surgery and Clinical Surgery in the University of Pennsylvania; Surgeon to the Pennsylvania Hospital, Philadelphia. New (sixth) edition, enlarged and thoroughly revised. In one octavo volume of one thousand one hundred and sixty-one pages, with six hundred and fifty-six engravings and a colored plate. Cloth, $6.00; leather, $7.00. Philadelphia: Lea Brothers & Company, 1893.

MINOR SURGERY AND BANDAGING.*

THE very favorable opinion expressed in this journal in regard to this "Manual of Minor Surgery," when the first edition appeared, was evidently well founded, and the appearance of a second edition marks the estimation in which it is undoubtedly held by students and practitioners. As a manual of minor surgery it will be difficult to find its equal. The chapters dealing with wounds, fractures, and antiseptics are modern in tone and clinical in spirit. The pictures are realistic, being photographed from life.

*By Henry R. Wharton, M. D., Demonstrator of Surgery in the University of Pennsylvania. In one 12mo volume of five hundred and twenty-nine pages, with four hundred and sixteen engravings, many being photographic. Cloth, $3.00. Philadelphia: Lea Brothers & Company, 1893.

CHEMISTRY AND PHYSICS.*

THE compend of chemistry and physics issued in "The Students' Quiz Series" appears to be an excellent sample of this admirable series of students' manuals. It is practically a hand-book of these sciences arranged in question-and-answer form.

*By Joseph Struthers, Ph. B., Columbia College School of Mines, New York; D. W. Ward, Ph. B., Columbia College School of Mines, New York; and Charles H. Willmarth, M. S., New York. $1.00. (The Students' Quiz Series.) Philadelphia: Lea Brothers & Company, 1893.

THE PHYSICIAN'S VISITING LIST.

So much has already been written in praise of Messrs. Blakiston's "Physician's Visiting List," that it is difficult to do more than repeat the eulogium bestowed in former years. This is undoubtedly one of the most popular visiting lists and is complete and compact in all its details.

THE ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES.*

THE sixth issue of the "Annual of the Medical Sciences" maintains the high reputation already achieved by its predecessors. The intention announced by the editor of giving the annual a more cosmopolitan character by interesting notable foreign savants has been to some extent fulfilled, and the present issue will be found to contain contributions from many European names of eminence. The general scope of the work is about the same as in previous issues, and the Annual will be found an indispensable guide to all who may require information on the modern aspects of any medical problem. The publishers have enriched the text with a large number of chromo-lithographs, engravings and maps.

* A yearly report of the progress of the general sanitary sciences throughout the world. Edited by Charles E. Sajous, M. D., and seventy associate editors. The F. A. Davis Company, Philadelphia.

MEDICAL PROGRESS.

MEDICINE.

THE PRINCIPAL MEAL.

SOME interesting discussions upon this important subject have occurred in the pages of the *American Medico-Surgical Bulletin* during the last few months.

There is much that can be said, *pro et contra*, on this question.

In all these discussions it appears to us that far too much importance has been credited to the stomach as a digestive organ, and too little consideration given to the intestinal canal and its work in preparing the food-stuffs for absorption.

For, the more the exact chemistry of digestion is studied, the clearer it becomes that comparatively little of true digestive work is accomplished in the cavity of the stomach (and much less in the vegetarian than in the carnivorous class).

The major work of the stomach, briefly stated, is that of a general macerating and hydrating tank.

Its minor work—its true digestive function—is, principally, to produce hydrochloric acid and to partially syntonize all forms of proteid compounds.

Prior to this syntonizing process, the gastric mucous membrane secretes also a milk-curdling enzyme, rennin, which has for its function the precipitating of the casein of milk into fine and feathery flakes, in which form this proteid substance presents a vast surface-area for the hydrochloric acid to act upon, and thereby to produce a transformation of the casein into an acid form of albumin, called syntonin.

After this change has been effected, a part of the syntonin passes through a series of isomeric changes, brought about by the presence of a second enzyme,—pepsin,—the third active constituent of the gastric secretion. By the action of the pepsin, some of the proteid bodies become converted into true peptones and this is the only state in which an albuminoid substance can be passed through an animal membrane by the so-called diffusion process.

When the digestive action, carried on in the stomach, is more closely studied, it is found that at the best a small portion only of the proteid substances is fully peptonized and made ready for absorption, through the action of the gastric secretions. The larger portion of the proteid bodies is carried over into the intestinal canal, either in their natural state or as syntonin,—that is, unpeptonized.

After reaching the intestinal canal, the proteids are acted upon by the alkaline salts contained in the intestinal secretion called pancreatic juice,—and transmuted into an alkaline form of albumin, in which state the proteolytic enzyme of the pancreatic juice—trypsin—can act upon them, converting them into diffusible peptones.

(The vegetable proteids owing to their higher molecular structure, are less easily peptonized in the gastric cavity, than the animal proteids are; and, consequently, the vegetarian diet imposes relatively more work upon the intestinal ferments than would a mixed diet.)

The starches, sugars, and fats are not digested, in the strict sense of the word, in the stomach; that is, they are not changed, from their natural state and converted into an absorbable form. True it is that, by the mechanical action of the stomach, its macerating and hydrating property,—together with a partial peptonizing of the proteid elements of both the animal and vegetable food-stuffs,—the oil globules and the starch granules are in a measure uncased, to a certain extent set free, and placed in a more favorable condition for the pancreatic, intestinal, and hepatic secretions to act upon them,—transmuting them into a perfectly absorbable condition. Hence we find that a large portion of the proteid bodies, besides all the starches, sugars, and fats are digested, in the strict meaning of the term, only in that portion of the digestive tract which is *below* the outlet of the stomach.

If we consider this vast digestive field, independent of and entirely separate from the stomach, that has to have its nervous mechanism called into action, to set in motion the intricate chemical processes by which nature accomplishes the conversion of non-diffusible compounds into easily diffusible substances, it is found to be no trivial task that the system has thus to perform. Is it, then, to be wondered at that something *more* stimulating than simple mechanical irritation by pressure and friction of the food-stuffs against the mucous membrane of the stomach and intestinal tract is required to call into play the reflex irritation and innervation which govern the harmonious working of this widely ramified digestive system?

By the infant, the milk is taken from the mother's breast at a temperature of 100 Fahrenheit (37.6 centigrade). This milk is largely supplied with fat and lactose. The lactose is already in a state nearly fitting it for absorption without the aid of the digestive ferments; while the fat is also partially emulsified and almost ready for absorption by the lymphatics, so that both these CHO compounds rapidly reach the point in the economy at which they are to be oxidized, and to render service to the system through heat production.

It is pretty clearly established that, from the oxidation of the glucose in the liver, and of the fat in the lungs, the peripheral nerve-endings of the centripetal nerves are constantly influenced by thermal impressions; and thereby reflex impulses are constantly transmitted to the ganglion-cells of the cerebro-spinal axis, there to be transferred to other cells and sent out as centrifugal impulses by which the chemical processes and the isomeric transmutation of the proteid bodies within the system are kept in motion and life maintained.

That the glucose is oxidized in the liver, yielding heat at this point, is established by its rapid disappearance in the heptic gland, and by the fact that the temperature of the blood when leaving the liver by the hepatic vein, is considerably higher than that of what enters through the portal system and hepatic artery. This difference in temperature, furthermore, cannot be accounted for completely by the heat known to be produced through the oxidation of the proteid bodies in the liver, neither by the frictional heat produced by the blood circulating through this organ; but this increase in the temperature of the hepatic blood is easily accounted for when the heat produced by the oxidation of the glucose in the liver is taken into the account, and added to that produced by friction and by the oxidation of the proteids.

Now, knowing how, where, and when our food-stuffs are digested, and the results obtained from their utilization,—the discussion of stimulation before meals, and when to take the principal meal, can be considered upon scientific principles; and habits and customs will become intelligible.

The infant, so soon as the glucose and fat are burned out, and heat production tends to fail, proceeds to seek for and take in a new supply of heat-producing elements and nutritive pabulum—hunger being essentially a demand by the system for heat-producing substances, such as the CHO compounds, and constructive material, such as the proteid substances. As the digestive organs are called into activity, the blood flows toward the splenic arcade and away from the cerebro-spinal axis; while the latter has, from the decreased production of heat, in a measure lost its reflex stimulation. As a natural result the activity of the nervous system is held in abeyance, and the child is liable to fall asleep while nursing.

When the glucose and fat from the recently ingested meal begin to flow into the system again in considerable quantities, and are rapidly oxidized, they stimulate anew the cerebro-spinal activity. After a little time the infant wakes, becomes active and restless; by which the heart and circulation are brought into increased activity; respiration is deeper and more complete, and the intake of oxygen larger, to perfectly oxidize the recently absorbed nutritive and heat-producing pabulum.

As a result of the enhanced circulatory activity, the new supply of nutritive material is distributed rapidly and uniformly to the various parts of the body; oxidation is fully sustained, assimilation perfectly maintained, and the growth and development of the animal economy steadily progresses.

Let the baby be exhibited to the numerous friends and kept too long away from the base of its supplies, or let the interval be otherwise too long between feeding times,—and the result is an imperfect digestion of the meal ingested, simply from lack of primary heat-supply to set in motion the reflex nerve phenomena necessary for a perfect digestive function.

Such a slight deviation from the proper time of feeding is often the beginning of an attack of indigestion which may culminate in the child's death.

The same law holds true in the adult subject if the interval between the meals has been too much prolonged. In these instances, also, the mechanical stimulation by the food-stuffs is not quite sufficient to whet the appetite and set in motion the reflex nerve-phenomena which are absolutely necessary for a perfect digestion. This defective result is likewise brought about by allowing the heat production to fall too low; that is, the physiological furnaces, like ordinary fires sometimes, are allowed to burn so low that the mere regular food supply is not sufficient to start up the fires, but rather tends to put them out completely. In the ordinary furnace, when a mass of fuel is added at this low flickering status, the fire goes out; in the human subject the meal fails to digest, and lies in the stomach "like a lump of lead," or passes into the intestine, there to ferment and cause no end of mischief.

This deficiency is particularly apt to occur between the last meal of the day and the first one of the succeeding day, where the interval is longest. Consequently, the common tendency of the human race is to demand something warm and stimulating to start up the sluggish nervous mechanism and set the fires in motion. As with kerosene, used to start the morning fire,—if that stimulation is carried too far, it becomes as detrimental to life as too much oil in starting the fire. Both, properly used, are advantageous.

When the amount of work performed after the last meal of a day is considerable, and the meal was in itself light, the next morning must of necessity find the physiological economy at a low ebb; then the need of stimulation is great; while the reverse holds true under opposite circumstances.

Which, then, and of what kind, shall be the principal meal: morning, noon, or night?

As, in the running of an engine, the most intensive consumption of fuel must be just prior to, and in accord with, the amount of work to be performed; so, in a man, the time for taking, and the quantity and quality of the meal ingested, or the determination of the "principal meal," must be in harmony with the work to be accomplished.

If the individual is to begin his daily labors between four and six in the morning, and terminate them between five and six o'clock in the evening, it necessitates the taking of a good and liberal breakfast at an early hour in the morning, from a half hour to an hour before beginning active work,—especially so if the last meal of the day previous has been a light one at six o'clock, as is the common custom among this class. Habits of this kind naturally call for the heaviest meal, which also may be called the principal meal, at noon, or near that hour.

On the other hand, if the custom is to rise between six and eight in the morning, and the largest amount of work is performed between nine in the morning and the succeeding midnight, an entirely different arrangement of the meals must be followed. In this class a light breakfast is in order at about eight in the morning; a stronger, more substantial meal at one o'clock in the afternoon, and the heaviest, and what justly deserves to be called the principal meal, should be taken from six to seven in the evening, because this is more nearly in the middle of the working hours.

When the labors are continued until midnight, and the hour for resting is after this time, a light meal should be taken at eleven o'clock.

In either instance cited, if the food-stuffs taken have been easy of digestion, rapidly absorbed and oxidized, the fires will naturally burn low after several hours sleep and abstinence from food. On the other hand, if the food-stuffs taken require considerable time for their digestion, and are slowly absorbed and oxidized, the heat-producing supply may not be exhausted completely during a somewhat prolonged abstinence from food, or during the hours usually spent for sleeping. In the former instances, the demand for hot stimulating drinks before the morning meal is justified, in order to excite the reflex nervous mechanism to start the chemico-physiological processes of digestion, until heat can be developed by nature's inherent process to carry on the work. In the other class of cases this extraneous heat supply may not be needed. In the former, they are absolutely demanded, to maintain a perfect state of health; while in the latter perfect health may be sustained without their aid.

In neither instance can it be said that an unhealthy state exists; but in the one, the fires are allowed to burn very low, and consequently require a little more effort to get them in motion again,—which is not the rule in the other class.

Thus, the time for the principal meal and its composition must be governed entirely by the chemico-physiological laws which determine the development, growth and maintenance of animal life;—taking into due consideration the amount and kind of work to be performed, and the period of the twenty-four hours at which the labor is to be done.

The need for special stimulation before the first meal of the day will also be governed by the composition and quantity of the last meal taken before the night's sleep, and by the amount of work performed after the last meal, and the duration of the somnolent period.

In using the word *stimulation*, alcoholics are not necessarily intended; although, if scientifically and judiciously used, they can be made to serve a valuable purpose in the advancing years of life.

Much better and less dangerous agents, however, are at our command for starting the digestive process during adolescence and the adult period of life,—such as hot broths, coffee, tea, et cetera.—*American Medico-Surgical Bulletin.*

THE PSYCHICAL SEQUELS OF GASTRIC DILATATION.

Dr. Devay, as reported in the *Journal de Medecine et de Chirurgie*, of Paris, instituted during his stay at the Asylum at Brow, a great number of observations with regard to the influence of gastric dilatation on the nervous system. He demonstates that in those predisposed to mental alienation, dilatation may directly cause insanity, and that in the previously insane it is apt to most peculiarly modify the form of their mental disease. Just as the septic uterus, after an accouchement, may poison the entire system, and superinduce puerperal insanity, so the dilated stomach may produce a toxic condition with a strong tendency to melancholia. Bayle and Maury have already pointed out the relation existing between gastro-enteric disease and some forms of melancholia, but they interpreted the latter as a sympathetic phenomenon. It rested with Dr. Devay to demonstate the process to be one of genuine intoxication. The manner in which dilatation of the stomach produces its psychical effects is simply this: The activity of the gastric juice being markedly diminished in a dilated stomach, bacterial fermentation is set up, the toxic products of which profoundly effects the central nervous system, calling forth phenomena of either a depressive or convulsive nature. M. M. Bauveret and Devic have shown how changes of character were wrought by dyspeptic troubles, and how in the predisposed the latter may prove the stepping stone to mental alienation. Individuals afflicted with gastric dilatation present a state of mental depression manifested by premature weakening of all intellectual faculties as of memory, concentration, will-power, judgment and of recaptivity for moral impressions. The influence exerted by gastric dilatation in the insane is also well illustrated by the modification which the preëxisting form of insanity undergoes when from derangement of the digestive function the mental disease lapses into its previous form. Dr. Devay recommends in all of these cases the institution of an active gastric and intestinal treatment. The asepsis of the alimentary tract should be insured with all means at our command. A free evacuation of the bowels is to be induced regularly. If feasible, the stomach is to be subjected to frequent lavage with a fifty per cent. naphthol solution, while internally preparations of naphthol combined with English magnesia are to be administered. This course of treatment has often produced most happy results.—*Medical Review.*

THE ETIOLOGY OF ACUTE ARTICULAR RHEUMATISM.

SAHLI (*Deutsche Archiv für klinische Medicin*, Bd. H. li., 4 u. 5, page 451) contends that although the infectious nature of acute articular rheumatism has not yet been demonstrated, such an etiology is highly probable from the point of view of modern general pathology. In favor of such a causation are the acute febrile course, the local involvement of the joints, and the tendency to complication by endocarditis and inflammation of serous membranes. Sahli reports the case of a girl, sixteen years old, with a second attack of acute articular rheumatism, complicated by endocarditis, pericarditis, bilateral pleurisy, and, finally, left-sided pneumonia, death suddenly taking place with cyanosis, perspiration, and heart-failure. At the post-mortem examination vegetations were found not only upon the leaflets of the mitral valves but also upon the aortic semilunar segments and upon the lateral leaflet of the tricuspid valve; the pulmonary leaflets were free. Inoculations were made upon agar and gelatin from the endocarditic excrescences, from the enlarged bronchial glands, the synovial membrane and the contents of an affected knee-joint, the thickened pericardium, the inflamed pleura, and from blood from the heart. In almost all instances pure cultures of a single organism developed, which corresponded in all essential characters with the staphylococcus pyogenes citreus. Animal inoculations yielded negative results. The conclusion is expressed that the organism found is to be looked upon as the cause of the disease. It remains to be determined whether this organism is a distinct one or a modified form of the staphylococcus pyogenes citreus. It seems possible (and the possibility is supported by evidence) that acute articular rheumatism may be caused by attenuated pyogenic cocci, and future investigation must determine whether a single or several species of organisms have an etiologic relation to the disease. The bacteriologic examination in the case reported indicates that the so-called complications of acute articular rheumatism (endocarditis, pericarditis, pleuritis) were etiologically related to the primary disease, of which they were thus not complications but merely localizations. In numerous other cases of acute rheumatism subsequently examined, staphylococci were also found in the contents of affected joints and in the blood.—*American Journal of the Medcial Sciences.*

THE GENTLE TOUCH.

Mr. Bilton Pollard, in his address before the University College, London, gave a very timely and practical hint regarding the kindly treatment of hospital patients by internes. We regret to say that such a lesson is occasionally much needed in many of our public institutions, and the heeding of it will give that necessary exercise of the finer humanities which fits the graduates for the higher grades of successful practice among the so-called cultivated classes. The lecturer very properly maintains that an interne who can, by his gentle methods and appreciative sympathy, win the love and friendship of his poor and dependent patients, has gained as important an experience as any he can obtain in the hospital ward. Not that the ordinary hospital attendant intends any wrong, but there is, in some instances, a sudden inflation of his importance which invites dictatorial brusqueness, and an indisposition, in the exercise of duties supposed to be more important, to give time and thought to the exercise of the better elements of his manliness, by a compassionate consideration for the sufferings of such as are at his mercy. The cry of agony is never necessary for a diagnosis when the surgeon is the active agent of its production. The man who inflicts unnecessary pain in handling an injured limb is either a bungler or a brute.

The difference between the one who considers the feelings of his patients and the other who does not, is very apparent in the examination of a wound or the manipulation of a fracture. In the former the practised delicacy of touch discovers all that is necessary to know concerning the extent or character of the wound, without a sign of pain from the patient; while the latter, by the pressure and twist in the wrong place and at the wrong time, transforms the patient from a quiet, helpful, and submissive subject, to a shrieking and horrified sufferer. Even the most ignorant patient takes such lessons to heart. With a rich patron the question of choice could very easily be settled, but usually the sick or injurd pauper must submit to the inevitable. When we consider that the highest science aims to mitigate pain, we can hardly claim superior accomplishments or greater depth of learning for the man whose very touch is signalized by a howl.

While it may not be possible for everyone to obtain this refinement of manipulation, there is no excuse for not cultivating it in every instance. Scientifically speaking, a sick beggar is the same as a sick king. Their nervous systems are made alike, their reflexes are similar, and their pain-centres are equally responsive. The one who can learn early to treat them from the same stand-point of appreciation becomes the sympathizing friend of both, and will be as welcome in the palace as in the hovel. There may be a reason why all cannot be great physicians, but we all can be gentle ones. Even in our most desperate cases when all other remedies fail, the very last to lose its influence is the kind word, fitly spoken.—*Medical Record.*

THE DIAGNOSTIC SIGNIFICANCE OF HERPES LABIALIS.

Felix Klemperer (*Berliner klinische Wochenschrift*, 1893, Number XXIX, page 694) has made an interesting clinical and bacteriological contribution to the subject of the significance of herpes labialis in the differentiation of tuberculous from epidemic cerebro-spinal meningitis. He reports at length three cases of cerebro-spinal meningitis in which the possibility of a tuberculous origin had to be considered. Two presented a family history of tuberculosis. One was complicated by pluerisy with effusion. All presented herpes labialis. One terminated fatally; the post-mortem examination showed the condition to be non-tuberculous. In the other two recovery took place. In one of these only pneumonia cocci were found in the fluid of the vesicles; while in the fatal case uncapsulated diplococci were found that in bouillon culture formed chains. The results are also reported of examinations of the contents of herpetic vesicles of the lip in nineteen other cases. In fourteen cases pneumonia cocci, staphylococci, and streptococci were variously found, but in every instance only one form. In five cases in which the contents of the vesicles had already become turbid, streptococci and staphylococci were found. The conclusion is reached that the microörganisms found in the fluid of the vesicles must be considered as the cause of the eruption, and, further, that they are the same as those causative of the primary disease. It is pointed out that herpes occurs commonly in the course of diseases (such as pneumonia and angina) caused by micrococci, or (such as rheumatism and endocarditis) in which micrococci cause secondary infection, and with but extreme rarity in the course of diseases (such as typhoid, diphtheria, and tuberculosis) that are dependent upon specific microörganisms. The deduction is thus reached that the appearance of herpes labialis, in the course of an attack of cerebro-spinal meningitis, may be considered as indicating a non-tuberculous origin.—*American Journal of the Medical Sciences.*

ENDOCARDITIS GONORRHOICA.

Leyden (*Deutsche medicinische Wochenschrift*, September 21, 1893) relates the following case in a man, aged twenty-two. In April he had swelling of one knee and both ankle-joints, and when admitted a month later the knee and left ankle-joints were still swollen. The clinical picture was characterized by (1) the presence of aortic and mitral disease; (2) irregular temperature with rigors; (3) repeated vomiting; (4) the development of acute nephritis; and (5) the malignant course of the disease. The patient died in three weeks' time. One of the aortic cusps was destroyed by ulceration and covered with vegetations. There was a large mass of vegetations on one of the mitral cusps. There was only one breaking down infarct, and that in the spleen. The kidneys were swollen, hyperemic, and contained microscopic foci of softening. The myocardium also contained similar foci. From the literature of the subject here detailed it appears that (1) the relation of gonorrhea to endocarditis is established; (2) a portion of such cases have a chronic course, and some even tend to recover; and (3) others have a malignant course. The bacteriological problem in gonorrheal endocarditis has hitherto been unsolved. Some investigations have shown that the streptococcus was present in the valves, but generally they have been inconclusive. This case thus provided the opportunity of settling the question of the pathogeny of this endocarditis. The blood examined during life gave negative results, as also that taken from the auricle after death. The fibrinous deposits were examined bacteriologically by Michaelis. Gonococci were demonstrated (1) by their shape; (2) by their presence within the cells; and (3) by the facts that they were decolorized by Gram's method, and very easily by alcohol and lavender oil. No other microörganisms were found. That no cultivation experiments were made is not looked upon by the author as any real objection, as the above-named characteristics are sufficient. Although the settling down of the gonococci upon the endocardium is remarkable, it is not very surprising, as blood serum is a medium well suited to these microörganisms.

THE TREATMENT OF EPILEPSY.

Flechsig (*Neurol. Centralbl.*, Number VII, 1893) gives a preliminary account of a new mode of treating epilepsy lately originated by him, which he found to be more effectual than methods previously used. His plan consists in giving small but increasing doses of opium for about six weeks then discontinuing the opium and substituting large doses of bromide (about seven and five-tenths grammes daily). After continuing these for two or three months the dose was gradually brought down to two grammes daily. The result usually obtained was cessation of fits as soon as the bromide was commenced; the observations, however, did not cover any great number of cases or period of time. Stein (*ibid.*, October 1, 1893) has used the method in several cases, of which he specially refers to six. In three of these patients the fits stopped shortly after beginning the course of bromide; the patients then passed from under observation. Two of the remaining patients had no fit from the time that the bromide was substituted for the opium until the date of report (early part of July to September 15), their general health improved, and their body weight increased. The last casé was a boy in whom the fits were arrested for only a few weeks. Prior to the opium treatment this patient had been intolerant of bromide; but after it he could take five grammes daily. In general Stein thinks favorably of the method, and recommends it especally for children.—*British Medical Journal.*

SURGERY.

TREATMENT OF SOFT CHANCRES BY HEAT.

Lorand (*Wiener medicinische Wochenschrift*, Number XL, 1893) describes this mode of treatment, which he saw carried out by Welander at Stockholm. It is based on the observations of W. Boek and of Aubert, the latter of whom found that chancrous pus heated to 40° centigrade became non-inoculable. Welander's method is as follows: Water is conducted by two pipes, one carrying hot and the other cold water, to a copper reservoir, and is there kept at a temperature of 50° centigrade by means of a gas jet. From the reservoir the water is carried by rubber pipe to a coil of lead tubing through which it circulates, and then escapes by another rubber pipe. If the reservoir is kept at 50° centigrade it is found that when it reaches the coil it has a temperature of about 41° centigrade, below which it must not be allowed to fall. The ulcers are dressed with pledgets of cotton wool soaked in warm water, any undermined edges being first snipped off. A layer of moist wool is then applied round the penis, and over this the lead tubing through which the hot water is kept flowing. Another layer of wet wool covers the tubing, and the whole is covered with gutta-percha tissue. The dressing is changed three times a day. Lorand saw about twenty cases, in some of which the chancres were both numerous and large, treated in this way. In the majority it was found that after two days' treatment the ulcers were clean and healthy, and then the secretion was no longer inoculable. The patients were then allowed to go home, and were treated as out-patients. The sores usually healed quickly under the application of dermatol. Welander's statistics showed that among one hundred and eighteen patients who had been treated by his method at an early stage there was no case of bubo.—*British Medical Journal.*

GYNECOLOGY.

CONSERVATIVE SURGERY OF THE OVARIES.

In the first place it is important to define precisely within what limits one may apply the rules of conservative surgery in operation on the uterine appendages. Pozzi does not believe in the efficacy of any operation for the purpose of restoring the physiological functions of a diseased fallopian tube, as he considers that the moment the tube become extensively inflamed, it is no longer capable of discharging its functions normally. In consequence, he does not include partial resection of the fallopian tubes in the conservative surgery of the uterine appendages. Operations which fall under this head can only be performed with benefit, in his opinion, when the tube is sound and potent throughout its whole length. In other words, partial operations are only justifiable in cases of disease of the ovaries. He does not insist upon the fact that the presence of a small portion of ovarian tissue is sufficient to insure the occurrence of menstruation, and, consequently, makes conception possible, for this has been proven by numerous observations.

It may be laid down as a general rule that whenever the ovary is alone affected, the tube being still sound, one should endeavor, as far as possible, to retain a portion of the organ, for the latter should only be removed in its entirety when no other procedure is likely to be attended with success. The most favorable cases for operation are those which are most compatible with the preservation of the functions of the unaffected part of the organ—cases of solitary ovarian cysts situated toward one or the other extremity of the gland, dermoid cyst, proliferous cyst (early stages), large follicular cyst, and cyst of the corpus luteum.

Under these circumstances, the operator has no choice of the procedure he should adopt; he must proceed as follows: The first step in the operation is to make sure the fallopian tube is patent by introducing a probe through the fimbriated opening down to the uterine end of the tube. Then, while the ovary is held fast by an assistant, the surgeon removes the diseased portion of the organ by means of a wedge-shaped incision. The edges of the wound are brought together with catgut sutures, thus securing perfect apposition of the cut surfaces, and at the same time arresting hemorrhage.

The same methods are applicable in cases of multiple cystic degeneration of the ovary when a portion of the organ is still intact. In such cases the part next the hilum usually remains unaffected. The incision is carried round that part so as to leave the base of the organ untouched, and the lips of the wound are united with catgut. In cases of this kind the fimbriated extremities should be stitched to the ovarian stump to prevent the tube hanging loose in the peritoneal cavity.

Ignipuncture may be employed instead of partial incision. In cases of multiple lesions of the ovary in the form of small scattered cysts and of diffuse oöphoritis it is expedient to open those cysts with the point of the thermo-cautery, the surgeon being guided by the sense of sight and touch. The objection may be raised to this method that it may give rise to the formation of cicatricial tissue on the surface or even in the substance of the organ. The condition of sclerosis would be induced in such a case rather than cured. This would certainly be the case if cauterization was followed by suppuration and healing by granulations, but here the process is a very different one. Inside the peritoneal cavity there is perfect asepsis; the slough is gradually absorbed with the formation of granulation tissue. The results of clinical observation even tend to show that the irritation set up by the cautery in the sclerosed ovarian stroma promotes its absorption.

It may also be objected that ignipuncture may give rise to cystic degeneration of the ovary, but this is not proven. It is conceivable that the application of the cautery to an organ supplied with a large number of glands in close proximity to one another, like the cervix uteri for example, may cause occlusion of the orifices of some of the ducts, and thus give rise to the formation of cysts; but in the ovary we are dealing with closed follicles, and there is nothing to interfere with the free development of such of these as have not been destroyed by the cautery. Dr. Pozzi has obtained several cures by this method, while the productive powers of the patients are, to some extent, retained, and time will show whether the cure is likely to be permanent or not.—Pozzi, in *Semaine Médical.*

THERAPEUTICS.

THE EVILS OF SUBSTITUTION.

The term "substitution," in its commercial sense, is the perpetration of a fraud by the seller upon the buyer, the former selling the latter something different from the article demanded, under the same name. This fraud is really but another phase of commercial adulteration, and in the practice of pharmacy its evils are as insidious and harmful as those of any crime committed by man. These evils are both direct and remote in their effects. They injure, first, the patient; second, the physician; third, the manufacturer. From the stand-point of the patient, the evil affects him directly and indirectly. The dishonest pharmacist has, of course, palmed off on his unsuspecting customer a cheaper preparation than that ordered by the prescriber, because the motive for the crime is, in ninety-nine cases out of a hundred, a mercenary one. The result to the patient from the inhibition of the substituted article may be one of the following: first, no therapeutic action; second, therapeutic action of less potency; third, therapeutic action of greater potency; fourth, therapeutic action of different character than aimed at by the prescriber. It needs no argument to prove that any of these four results would, under certain conditions, be likely to prove disastrous to the patient.

The pharmacist is the responsible and trusted dispenser of the physician's order, and when he acts differently than ordered by the doctor, he snips at the threads of fate, possibly without the slightest idea of what will result from the snipping. Then he is no better than a man who fires a bullet among a crowd of people. The result in either case may be manslaughter. Let us take a less extreme view of the crime from the patient's stand-point. The latter fails to get benefit from his medicine, and, as a result, loses time and money. He was cheated when he bought the preparation. Now, indirectly, he has lost the fee he paid the physician, and last, but not least, he has lost confidence in his doctor.

From the stand-point of the physician the evils of substitution have a wider range in their effect than on the individual patient. Medicine has been said to be an inexact science. The reason of this is because it is very difficult to ascribe a given effect to a certain cause. In other words, so many causes operate to produe a given effect in the human economy that it is difficult to ascertain and fix upon a definite cause. Modern therapeutics is the outcome of the physician's observations and experience of the effect of drugs upon the human system. It is a science to which every physician contributes his mite or his much, according to his ability and his opportunity.

The pharmacist who substitutes, leads physicians astray. By presenting false premises to the latter, the former causes him to make erroneous deductions. The entire medical profession may thus feel the result of a single instance of substitution, and numerous other invalids suffer on account of the error of following faulty experience in the case of the physician treating a single patient who is the victim of the fraud in question.

I have already spoken of the loss of confidence in his physician on the part of the victimized patient. This has not only a direct effect upon the invalid, because confidence in his doctor's efforts are, to a great extent, essential to the latter's success in the treatment of the case, but it may also cause the dismissal of the physician and his loss of what perhaps would have been a lucrative practice. In this country physicians have the reputation of being practical. They are the best practitioners in the world. In other countries, medical men are deeper students and better theorists, but here, we pride ourselves on the results we obtain in curing disease. The reason for this is because we strive less for honor and glory than we do for the almighty dollar. We must give our patients the worth of their money, and we know that we will not be tolerated unless we do. Our patients are quick to discover mistakes, and they are laid at the door of the physician rather than at that of the pharmacist. If this was not the case, the subject of substitution would not be worth consideration, for it would be a rarely committed crime.

The question of injury to the manufacturer is a very important phase of the matter, for, rather singularly, the remedy for the great evil must spring mainly from this source. This is not so strange after all when we come to think of it, for here we find the effects of the evils of substitution so direct and so distinctly felt that interest is natural. Nothing causes men more concern than pecuniary loss. Cause and effect are here so closely associated that a hue and cry at once follows. The manufacturer invests large sums in producing a reliable preparation; he spends more in bringing it before the medical profession. The latter find it worthy of use and patronize it until the weeds of substitution check its growth. The way these weeds act after what I have said is obvious. For example, some pharmacist substitutes an inferior mixture or drug in the preparation of the physician's prescription; the effect of the medicine on his patient is nil. The disappointed doctor heralds the fact to his brethren. Such news travels faster than any favorable comments, and undoes in a short time that which the manufacturer has taken months or perhaps years to accomplish. Great injury is in consequence done to a deserving business.

Then again, the evil is a widespread one, and the same substitution in a good preparation is very large and directly affects its sale. I know of no other crime that tends so much to destroy one's faith in man's goodness as substitution. For the sake of insignificant profit the dishonest pharmacist deliberately cheats and perhaps destroys his fellow man. I can only account for the practice by assuming that the perpetrator in some way pursuades himself that he is doing no harm, that he is selling something "just as good," that he holds the judgment and knowledge of the physician in small repute, and that he feels perfectly competent to act in the premises. It is a curious psychological fact that it is the easiest thing in the world for a man engaged in a nefarious trade to pursuade himself that he is doing no harm so long as he is making money by his acts.

To correct the practice of substitution does not seem to me a difficult matter. A few years ago the adulteration of food products was a very serious fraud. Confectionery, for example, was greatly adulterated at that time. The exposure of the practice by the Health Department of New York City so injured the confectionery business that the reputable manufacturers banded together in an Anti-Adulteration League. Not only did the Health Department cause the formation of the league in the way I have described, but the unfair competition engendered by adulteration also had its effect in forcing honest manufacturers to protect themselves. This league made it its business to run down and punish all persons who adulterated their wares. The result was that in a short time adulteration ceased, and today it is impossible to find any adulterated candy offered for sale. Another instance of manufacturers banding together for mutual protection is offered by the Jewelers' Protective Association. This body pursue like an avenging Nemesis any one who robs or cheats its members. Let the manufacturers of pharmaceutical preparations who suffer from the evils of substitution form a like union and charge its agents with the duty of bringing to justice the perpetrators of the fraud of substitution. The Penal Code and the Pharmacy Act both afford excellent laws for the punishment of these criminals. The Board of Pharmacy is not sufficiently equipped to enforce the provisions of the law to this end, and the Health Department is too busily engaged in fighting disease to cope with the evil. The formation of such a union as I have indicated, however, and the punishment of a few offenders would soon stop the practice. The mere publication of a few instances of fraud, giving the names and addresses of the dishonest pharmacists, would go far toward suppressing substitution, for the public is quick to discover and shun the druggist who is considered unreliable and unscrupulous.—C. Edson, M. D., in *Doctor of Hygiene.*

PATHOLOGY.

HEMOLYMPH GLANDS.

In the *Quarterly Journal of Microscopical Science*, 1883, Nova Scotia, Volume XXIV, will be found a paper of mine on some structures lying between the renal artery and vein in the human subject. These small bodies consisted of minute ganglia, lymphatic glands, a small body having the structure of the suprarenal capsule, and some glandular bodies which somewhat resembled compound lymphatic glands, with this difference, that instead of lymph circulating through them, there was a current of blood passing into what would be the lymph sinuses in a lymphatic gland, from vessels lying in the fibrous trabeculæ. I found these structures in three consecutive cases, and concluded that they were permanent. Other work intervened, and I did not at that time examine any more cases for these interesting structures.

In the *Lancet*, November 29, 1890, there appeared a paper by W. F. Robinson, a student of Edinburgh University, working under the direction of Dr. Russell, entitled "Prevertebral Hemolymph Glands," giving a description of these glands in the sheep and bullock as well as in man, which accorded with that given by me in the paper alluded to above in every detail; and Dr. Russell was stated to have suggested the name hemolymph glands, which I willingly accept, leaving out the prefix, which is superfluous. On seeing this paper I wrote to Dr. Russell and sent him a reprint of my own; but as I received no answer from him I am unable to say whether he was aware of its existence.

The fact that my observations had been confirmed, and also the presence of these glands in the lower animals being determined, induced me to make further investigations into the subject, especially in various diseased conditions, to see if they were in any way affected.

I have removed all small structures lying in the connective tissue near the renal artery and vein in a number of cases, such as disease of the kidneys, chronic cystitis, stone in the bladder, general tuberculosis, and carcinoma. In all these cases I found these hemolymph glands generally more than one on each side. They varied greatly in size, but were similar in structure, and I found nothing to add to my previous description. In addition to these hemolymph glands I found a number of others. In almost every case there was on each side a gland having precisely the same structure as a suprarenal capsule. They varied greatly in size, but in the larger ones the three zones were shown as perfectly as in the normal gland. In one case this gland measured half an inch across. There were also some small lymph glands of the regular type. In the connective tissue I found some very small nodules, which from their minuteness were difficult to dissect out. These on section were found to consist of large cells with a well-defined nucleus; in some there were only a few of these cells, in others there were thirty or forty in the section. In every case they were enclosed in a delicate capsule so fine that it could only be made out with difficulty. Some of these cells contained a number of brown pigment granules. What they are is not clear. They resemble nothing in nervous tissue with which I am familiar. They have evidently some function, as each collection has a definite blood-supply; further investigation may throw some light on this subject. In none of the cases examined did I find the supernumerary adrenals affected with disease. The hemolymph glands showed acute inflammatory changes in some instances, but the only cases in which there was actual structural change was in general tuberculosis. The tubercular tissue was well developed and giant cells were numerous, but the tubercle bacillus was absent. It seems to me that this may explain some obscure tubercular conditions, and for that reason is worthy of further investigation.—Heneage Gibbes, M. D., in *American Journal of the Medical Sciences.*

MEDICAL MELANGE.

How the Charity Patient got the Better of the Surgeon.—A young man was admitted into the Jewish Hospital at Buda-Pesth, so badly injured that the surgeon decided to perform an operation upon him. While beginning to operate upon the patient's left arm the surgeon looked at his watch, and after finishing with the case, he noticed that his watch had been stolen from him by the patient's right hand. The thief was handed to the police for the continuation of "treatment." Fortunately the surgeon recovered his watch, but unfortunately lost a patient.

Japanese Dentistry.—While Mr. Hubbard was minister to Japan, I visited that country and spent a pleasant week with him. One day I was troubled with toothache, and Mr. Hubbard took me to a dentist and explained to the saddle-colored operator that I wanted the grinder extracted. I was placed in a bamboo chair and tilted slightly back. The dentist examined my teeth, talking volubly meanwhile to Uncle Sam's representative. Suddenly his thum and forefinger closed on the troublesome tooth, and before I had the faintest idea of what was going to happen, he lifted it out and held it up before me, smiling at the same time that vacant smile peculiar to the children of the Orient. "You were waiting for the forceps, were you not?" said Minister Hubbard with a laugh. "They do not use them here."—*Ohio Dental Journal.*

Vertical Handwriting is advocated in an article recently published in the *Popular Science Monthly.* From a hygienic point of view the author deprecates the present system of writing on a slant of fifty-two degrees, because—(1) The position assumed by the pupil is bad, being sidewise to the desk, and with only one arm supported, and as a result one shoulder is higher than the other; besides the head is commonly turned until a line connecting the pupils of the eyes is parallel to the line on which he is writing. This position, causing a greater elevation of one shoulder than the other, continued day after day, results in lateral curvature of the spine. (2) Nature impels him to twist his neck so that one eye shall be at the same distance from the letters he is making as the other; and unless he does turn his head the eyes are not equidistant from his work, which tends to shorten the sight of one eye and lengthen that of the other. This accounts, in great measure, for the need of two glasses of different power for the same person, so frequently met with at present. These bad effects are avoided by adopting the verticle method of handwriting. Other advantages possessed by the vertical are that it can be written more rapidly, and occupies less space on the paper. In England this new style is required in all branches of the civil service, and many English and Continental schools have adopted it.

A SUFFERING PATIENT WITH A STATISTICAL BENT.—A physician sends the *Medical Record* the following unique report from a former patient, who had been turned over to the care of a New York surgeon for operative treatment of tuberculous glands of the neck: "Account of Myself up to October 29, 1893.—Operated on May 10, October 16, 1890, and April 1, 1891. Have had eighty-seven enlargements up to now and sixty-six suppurating openings. Have now twenty-seven openings suppurating—six in neck and throat, six in chest, seven in back between waist and shoulder blade, two in thumb-joint, one in right armpit, three in left armpit, one in left side five inches below armpit, one in right side five inches below armpit. No less than one hundred and sixty quarts of pus have come from me. Have used no less than six thousand yards of bandages, fifteen yards of court-plaster, two yards of oil-silk, one hundred pounds of flaxseed, twenty pounds of absorbent cotton, six pounds of vaseline, one pound of salve, one pound of okum, two pounds of licorice powder and salts, one ounce of aristol, four ounces of iodoform, six hundred pills, mostly sulphide of calcium, ten plasters, one caustic pencil, seventy quarts inward medicine, two quarts peroxide of hydrogen, two quarts carbolic acid, twelve quarts liquor, one pint iodine, one-half pint balsam Peru, four syringes. This does not reach the figure at all. Yet it is enough to convince the most morbid. I hope to get well yet. Yours, et cetera."

COMMERCIAL MEMORANDA.

INFLAMMATORY RHEUMATISM.—Dr. W. V. English, of Keokuk, Iowa, reporting on a case of this nature, writes: During the past winter a remarkable case of inflammatory rheumatism came to my attention, which was remarkable for its persistency in constantly growing worse while under the lines of well established treatment. Not a whit of encouragement came from the treatment until the patent was confined to Tarrant's seltzer aperient as a neutralizer of the cause. Success complete in every particular crowned the effort. I consider it a sensible treatment including the principles of whatever therapeutical means one would employ.

FEBRICIDE IN MALARIAL TROUBLES.—In malarial troubles we have a multitude of depressing symptoms which keep the system in a low condition. We find many similar symptoms in neurasthenia. Are not many cases of malaria (so called) really caused by a deficient action of nerve force from the cerebro-sprinal system? If this is the case then we require a stimulating tonic to elevate these forces during this period of inaction, and by the elevation of these forces we restore the functions of life to a normal condition. Neuralgia caused by nervous depression must be corrected on a basis of common sense. If we administer anodynes the effect is only temporary. If the trouble is due to loss of nerve force we must raise that force to accomplish permanent relief. This is a practical manner of considering disease for the adoption of scientific treatment. In the treatment of malarial trouble, neurasthenia and neuralgia, the profession will find febricide pills worthy of their consideration, as it is a combination of remedies which merits their confidence and which has proved most valuable in my long experience with it.—Elias Wildman, M. D., Jenkintown, Pennsylvania.

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